Water Hyacinth Control Program
2008 Annual Report

Submitted Pursuant to:
Statewide General NPDES Permit (CAG990005)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate information submitted. Based on my inquiry of the persons who manage the program, *Marcia Carlock – Aquatic Weed Unit Office Manager*, or those persons directly responsible for gathering the information, *Paul Ryan –Water Hyacinth Control Program Environmental Scientist*, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Lucia C. Becerra, Chief Deputy Director Date

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EXECUTIVE SUMMARY

Water hyacinth (*Eichhornia crassipes*) is a non-native, free-floating, invasive aquatic plant. It grows in wetlands, marshes, shallow water bodies, slow moving waterways, lakes, reservoirs, and rivers. Water hyacinth negatively influences biodiversity, recreation, and agriculture. It de-stabilizes dissolved oxygen (DO) cycles, shades out important shallow water fish habitat, prevents boat passage, and blocks agriculture intakes.

The 2008 treatment season for water hyacinth was from April 1 through October 15. The abundance of water hyacinth was relatively light compared to past seasons.

Herbicide Application Summary

Herbicides and Adjuvant

The herbicides used for the WHCP 2008 application season include the following.

HERBICIDES

- 2, 4-Dichlorophenoxyacetic acid, dimethylamine salt (2, 4-D) (Weedar® 64). EPA Registration Number 71368-1.
- Glyphosate (N-(phosphonmethyl) glycine, in the form of isopropylamine salt) (Rodeo® Herbicide; Aquamaster®). EPA Registration Number 524-343-ZF.

ADJUVANT

- Agridex® (active ingredients: paraffin base petroleum oil and polyoxyethylate polyol fatty acid esters). California State Registration 5905-50017-AA.

Summary of 2008 Use

Figures 1-2 and 1-3 document when WHCP sites were available for treatment in 2008. The first WHCP herbicide application of 2008 occurred on April 5 and the final application was made on October 15.

In 2008, the WHCP used 336 gallons of 2, 4-D, 64 gallons of glyphosate, and 163 gallons of Agridex to effectively treat a total of 420 acres of water hyacinth in the Delta and its tributaries. Table 1-1 shows a summary of the herbicides used and acres treated in 2008.

On seven occasions, in five different sites, turbidity levels exceeded basin plan limits. On three occasions, the turbidity levels returned to levels acceptable within the basin plan on the follow up visit. In three other occasions, the turbidity levels on follow ups were still high, but consistent with the readings on the treatment dates. There were no exceedences for any other monitoring parameters. Also, no take of endangered species occurred. Finally, for 2008, all herbicide (and Agridex) residue concentrations at receiving water locations were all below (or not detected) limits specified in the WHCP NPDES permit.

Table 1-1 2008 Summary of Herbicide Use and Acreage Treated by Month

Month	2,4-D		Glyphosate		Agridex
	Gallons	Acres	Gallons	Acres	Gallons
April	0	0	.05	.06	.05
May	.54	.54	4.25	5.06	1.78
June	6.36	6.36	12.10	16.13	5.78
July	57.73	57.73	12.70	16.93	30.03
August	64.81	64.81	6.60	8.79	30.55
September	149.02	149.02	14.65	19.53	65.31
October	57.14	57.14	13.75	18.34	29.57
Total	**335.6**	**335.6**	**64.10**	**84.85**	**163.07**

1 INTRODUCTION

1.1 *Introduction*

Water hyacinth (*Eichhornia crassipes*) is a non-native, free-floating, invasive aquatic plant. It grows in wetlands, marshes, shallow water bodies, slow moving waterways, lakes, reservoirs, and rivers. Water hyacinth negatively influences biodiversity, recreation, and agriculture. It de-stabilizes dissolved oxygen (DO) cycles, shades out important shallow water fish habitat, prevents boat passage, and blocks agriculture intakes.

In 1982, SB 1344, Chapter 2, Article 2, Sec.64 amended the statutes of the California Harbors and Navigation Code to designate the California Department of Boating and Waterways (DBW) as the lead agency for controlling water hyacinth in the Sacramento-San Joaquin Delta (Delta), its tributaries, and the Suisun Marsh. DBW initiated the Water Hyacinth Control Program (WHCP) in 1983. The US Department of Agriculture-Agricultural Research Service (USDA-ARS) acts as the nexus for all federal regulatory processes as well as providing research, expertise, and decision-making input into the WHCP planning process. In 2008, the program operated between April 1 and October 15.

This program operates under the regulations imposed by the National Pollutant Discharge Elimination System (NPDES) Statewide General Permit (CAG990005) issued by the State Water Resources Control Board (SWRCB) and administered by the Central Valley Regional Water Quality Control Board (CVRWQCB), the U.S. Fish and Wildlife Service Biological Opinion (USFWS BO) (1-1-02-F-157 and 1-1-03-F-0114), and the National Oceanic and Atmospheric Administration Biological Opinion (NOAA Fisheries BO) (151422SWR2005SA00681:JSS). As part of the permit and biological opinions, a monitoring program and reporting schedule have been developed to evaluate the effects of the WHCP on water quality and federally listed threatened and endangered species. This annual report fulfills reporting requirements for the above named permits.

1.2 *Setting*

The WHCP includes portions of eleven counties that encompass much of the Delta and its upland tributaries. The eleven counties include Alameda, Contra Costa, Fresno, Madera, Merced, Sacramento, San Joaquin, Solano, Stanislaus, Tuolumne, and Yolo. The general boundaries for the treatment area in the Delta and its tributaries are as follows:

- West up to and including Sherman Island, at the confluence of the Sacramento and San Joaquin Rivers;
- West up to the Sacramento Northern Railroad to include water bodies north of the southern confluence of the Sacramento River and Sacramento River Deep Water Ship Channel;
- North to the northern confluence of the Sacramento River and Sacramento River Deep Water Ship Channel, plus waters within Lake Natoma;
- South along the San Joaquin River to Mendota, just east of Fresno;
- East along the San Joaquin River to Friant Dam on Millerton Lake;

- East along the Tuolumne River to LaGrange Reservoir below Don Pedro Reservoir; and
- East along the Merced River to Merced Falls, below Lake McClure.

Within the 2008 WHCP project area, there were 369 possible treatment sites that average between one and two miles in length. See Figure 1-1 for a map of the WHCP project area and sites sampled in 2008.

Figure 1-1. Water Hyacinth Control Program Project Area and Sampling Sites for 2008

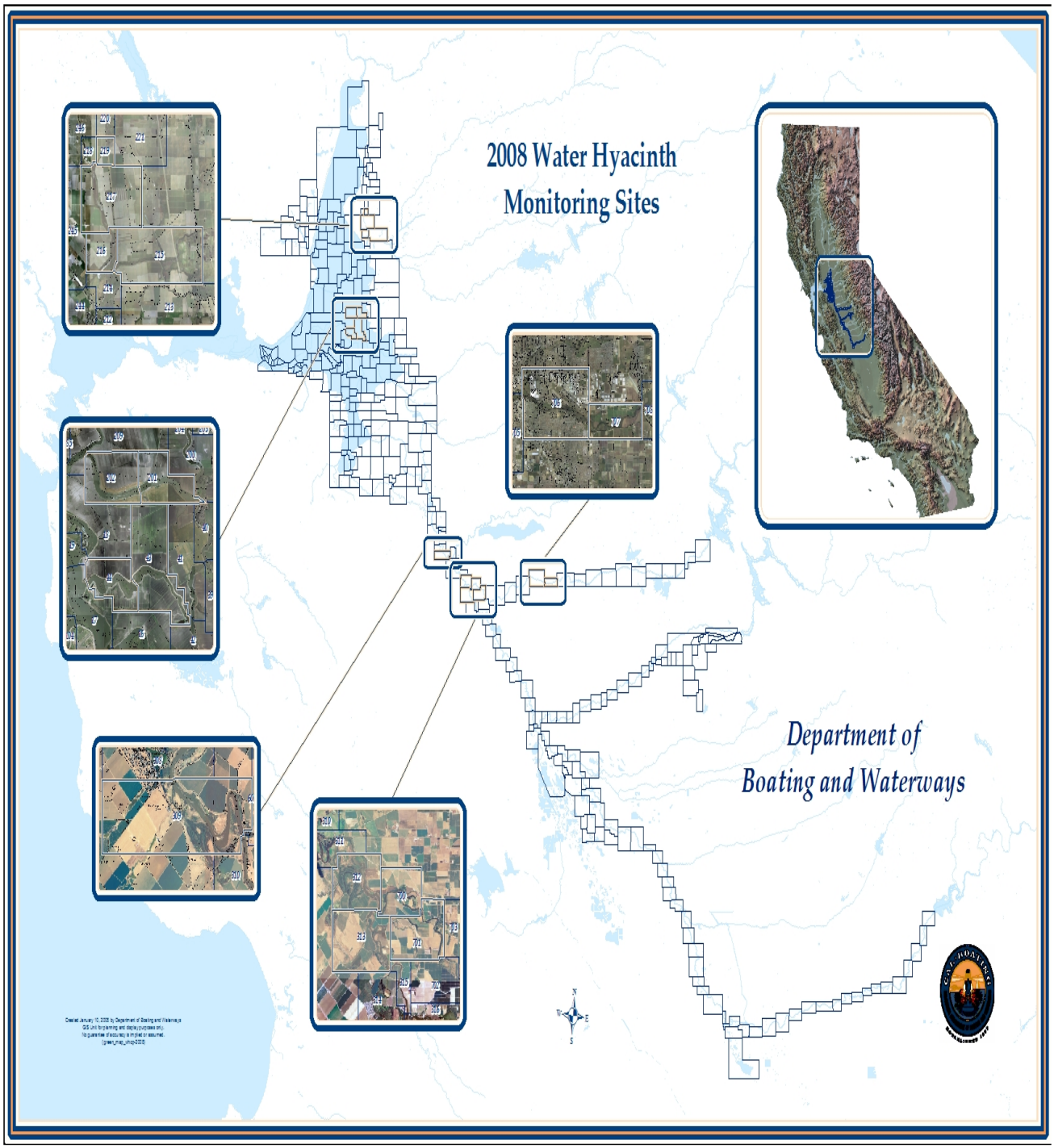


Figure 1-2. Water Hyacinth Control Program Treatment Dates: Northern Sites

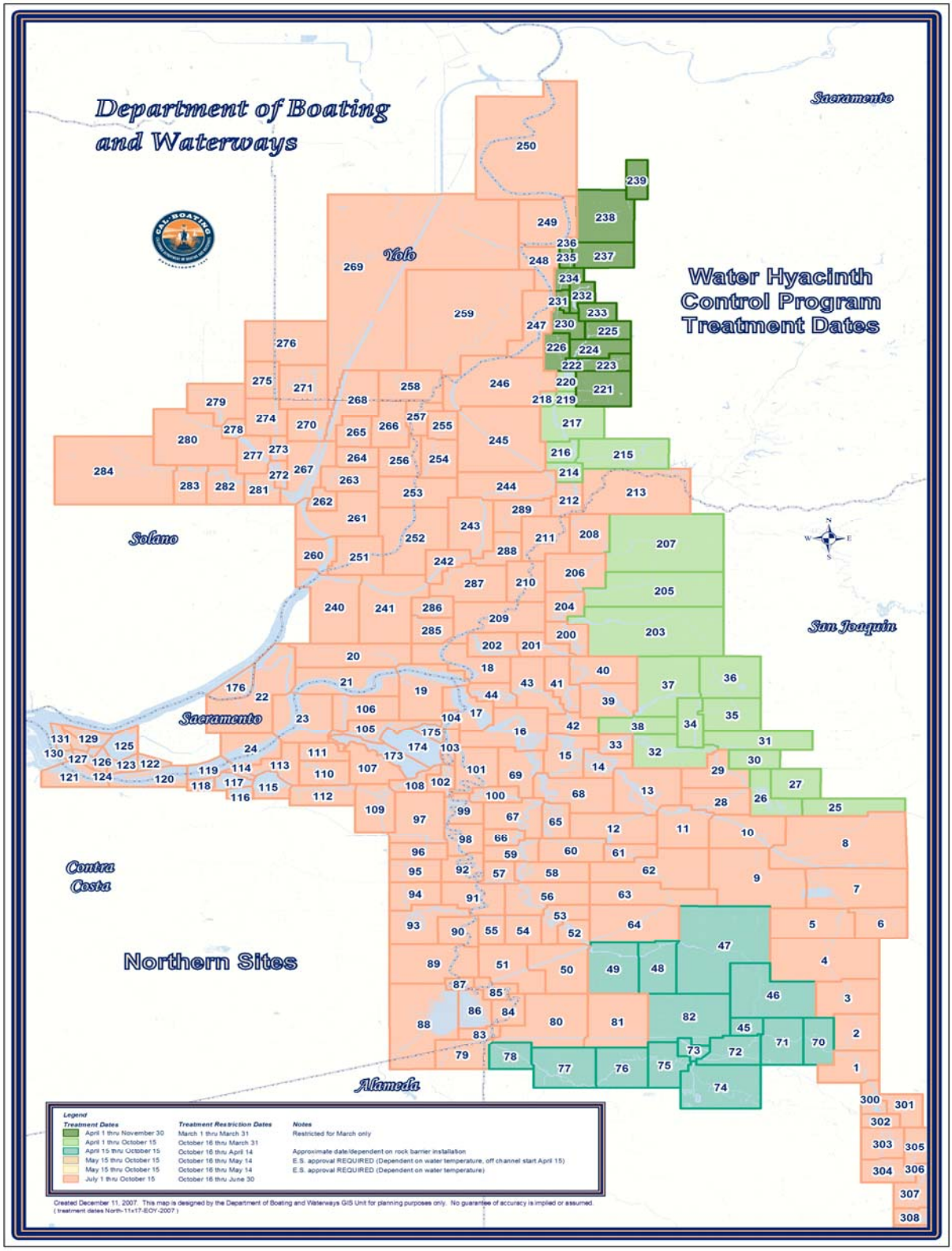
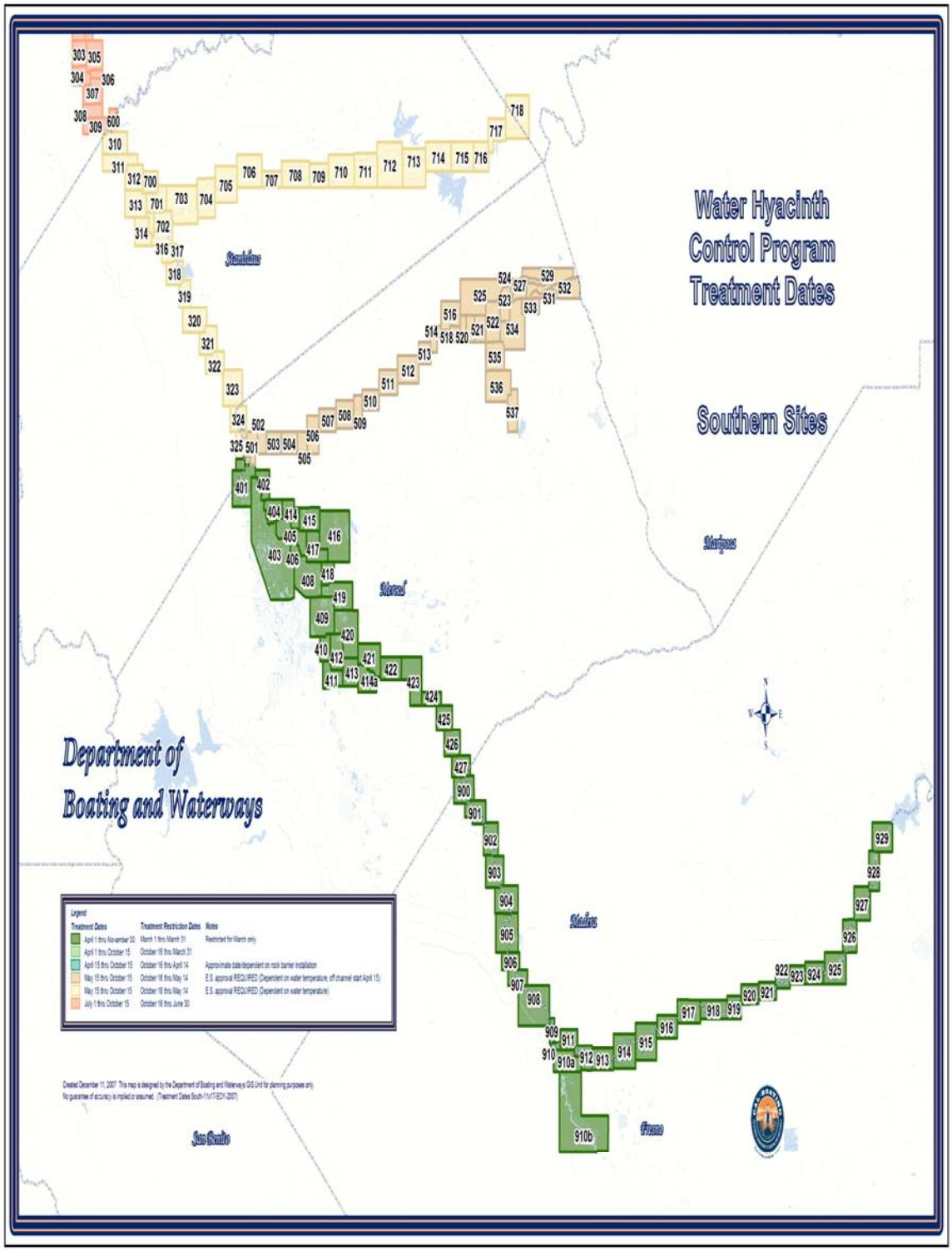


Figure 1-3. Water Hyacinth Control Program Treatment Dates: Southern Sites

1.2.1



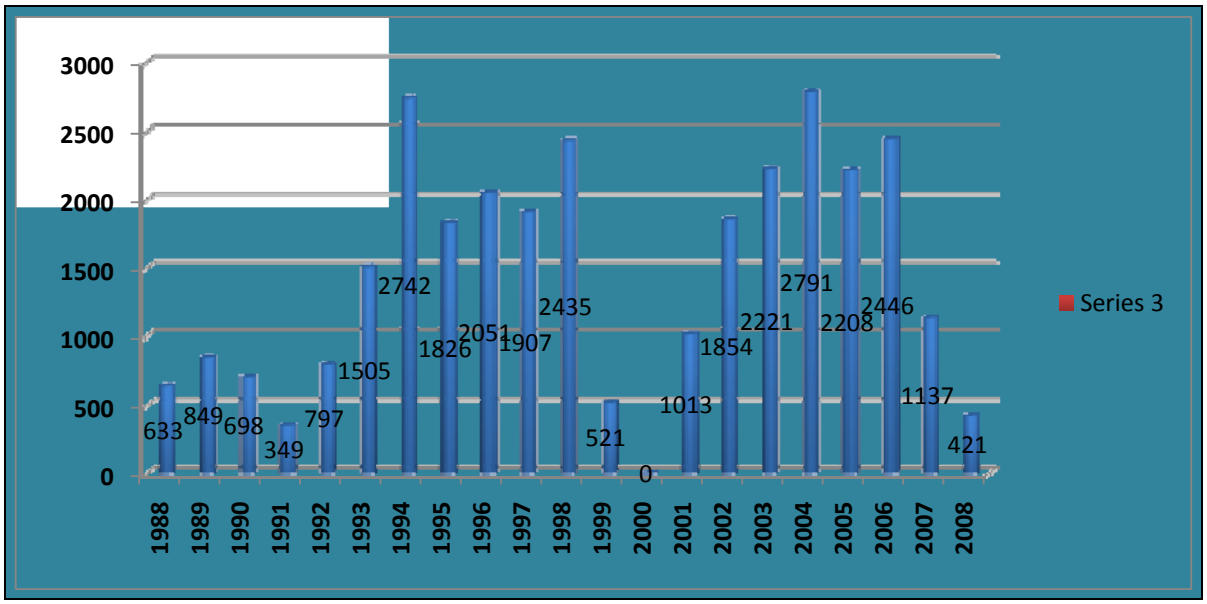
Measuring Extent of Infestation and Treatment Strategies

The DBW is responsible for controlling water hyacinth, a floating aquatic weed that can potentially grow in 50,000 surface acres of the Sacramento/San Joaquin Delta and its tributaries. Determining the annual extent of infestation has been difficult because both individual plants and large mats move with river current and diurnal tidal movement. Historically pre and post season infestation have been measured through visual estimates conducted by each WHCP application crew.

Each crew visually surveys all the sites in its application region. Herbicide applications are then prioritized such that nursery areas and areas that are critical to public, agricultural and industrial use are treated first. Logistics such as tide and travel times and daily weather conditions such as wind speed are also factored into daily site selections.

Figure 1-4 shows the number of acres treated from 1988 to 2008. There was no water hyacinth treatment in 2000 as the program was the subject of legal and regulatory changes, which prevented treatment during that year. The number of acres treated in a given year can reflect the magnitude of infestation; however other factors can affect the amount of treatment that occurs (regulatory limits, local conditions, weather, and staff levels). These kinds of variables make it difficult to show efficacy throughout the years. For example, this year, 2008, DBW treated 420.5 acres of water hyacinth using both 2, 4-D and glyphosate. Last year DBW treated 1,137 acres using the same herbicides, staffing, equipment, and protocols. This is a difference of 63.1% when comparing these two years. If we were to use the graph in figure 1.4 as a predictor, this number would fall right in line with what would be expected. The water hyacinth acreage seems to be descending and if the graph is consistent, acreage should hit a low point and start ascending again. This in no way answers the questions as to why; just merely an illustration to show that there seems to be a pattern to the amount of hyacinth the unit might encounter in a given year.

Figure 1-4. Water Hyacinth Acres Treated from 1988-2008



In order to better quantify the extent of water hyacinth infestation and identify “hot spots” for priority treatments, the DBW is currently working with UC Davis on a multiple year hyper-spectral-study. Hyper-spectral analysis uses remotely sensed data and identifies and

quantifies the extent of given vegetation type (or individual species) based on its unique reflective signature. It is hoped that the results of this study will enable the WHCP to make accurate estimates of water hyacinth acreage, better prioritize treatment and provide a method by which accurate year to year comparisons of the extent of infestation and treatment efficacy may be made. Final results of the study are not yet available.

1.3 *Program Compliance*

1.3.1 Endangered Species

In addition to following the application and endangered species avoidance protocols outlined in the WHCP Protocols and Procedures Manual, which is in compliance with NPDES general permit and the biological opinions of NOAA Fisheries and the USFWS, environmental awareness training per WHCP USFWS Sect 7 Permit (1-1-03-F-0114) Condition 5 and 10 and WHCP NOAA Fisheries Sect. 7 Permit (151422SWR2005SA00681: JSS) Section II (C) (3), training was conducted March 26th, 2008. This training included the following items.

- Species identification and impact avoidance guidelines on all threatened and endangered species associated with the WHCP
- Identification and protection of elderberry trees (*Sambucus ssp.*)(potential VELB habitat) and protocol for monitoring species fitness during an application season
- Identification and protection of the giant garter snake (*Thamnophis couchi gigas*), including life history, importance of irrigation canals, marshes, wetlands, and seasonally flooded areas as habitat; and the terms and conditions of the biological opinion
- Identification and protection of Delta smelt (*Hypomesus transpacificus*), Chinook salmon (*Oncorhynchus tshawwtscha*), steelhead (*Oncorhynchus mykiss*), and associated protected habitats, closure dates, and other agency requirements
- Protocol for “take,” including reviewing the “Incidental Take Statement,” collection and handling of dead species, completion of chains of custody, and notification of either the USFWS or NOAA Fisheries

At no time during 2008, was there any known “take” of protected species as a result of WHCP activities.

1.3.2 Herbicide Application

All herbicide applications must comply with basin plan dissolved oxygen (DO) limits as well as wind speed and acreage limitations. In 2008, all herbicide applications were in compliance with acreage and wind speed restrictions.

Herbicide applications may be made only when DO levels are either above the Basin Plan limit adopted by the Central Valley Regional Water Quality Control Board or below 3.0 mg/L. Basin plan DO limits for the entire WHCP project area are shown in Figures 1-5 and 1-6.

Figure 1-5. Water Hyacinth Control Program Dissolved Oxygen Limits: Northern Sites

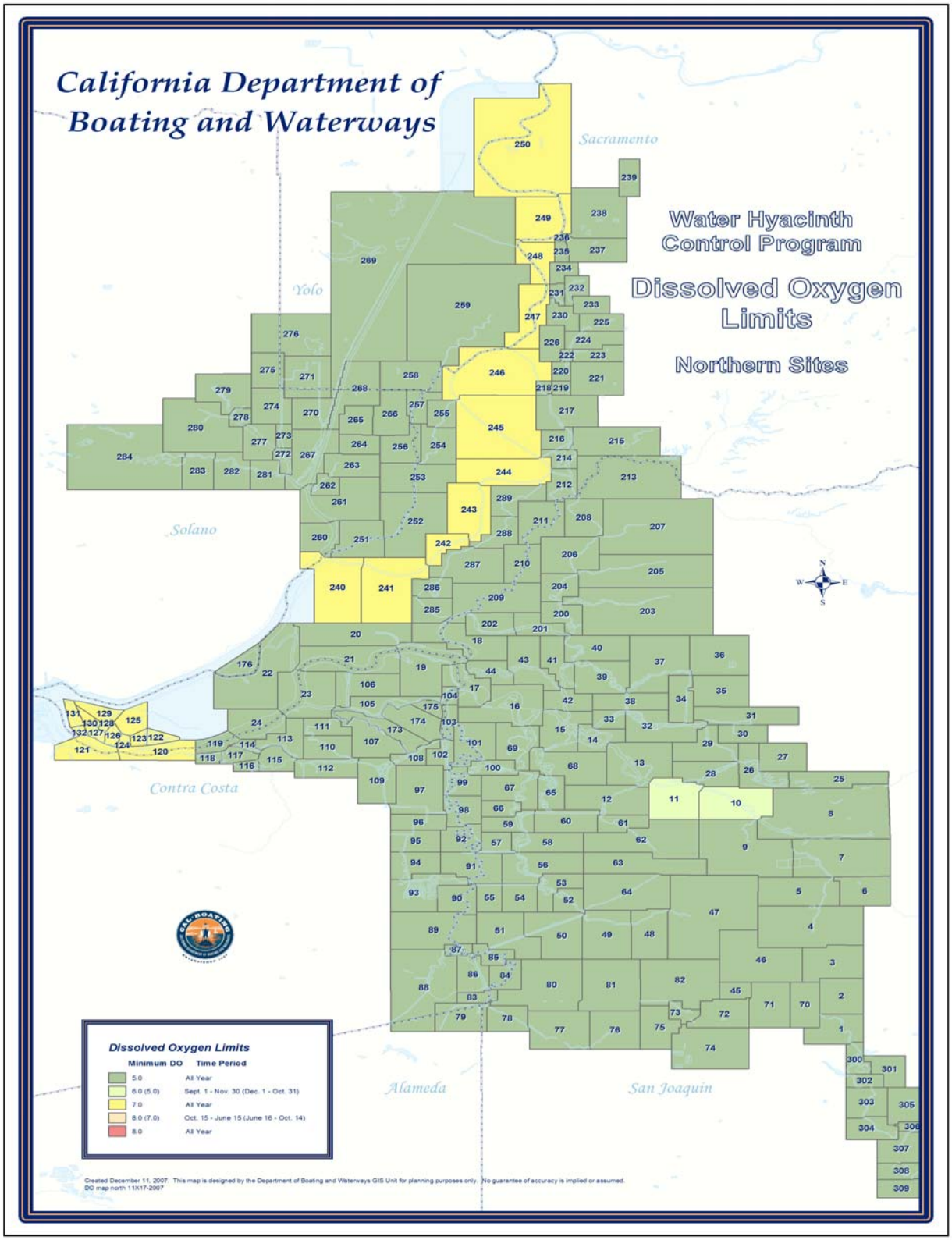
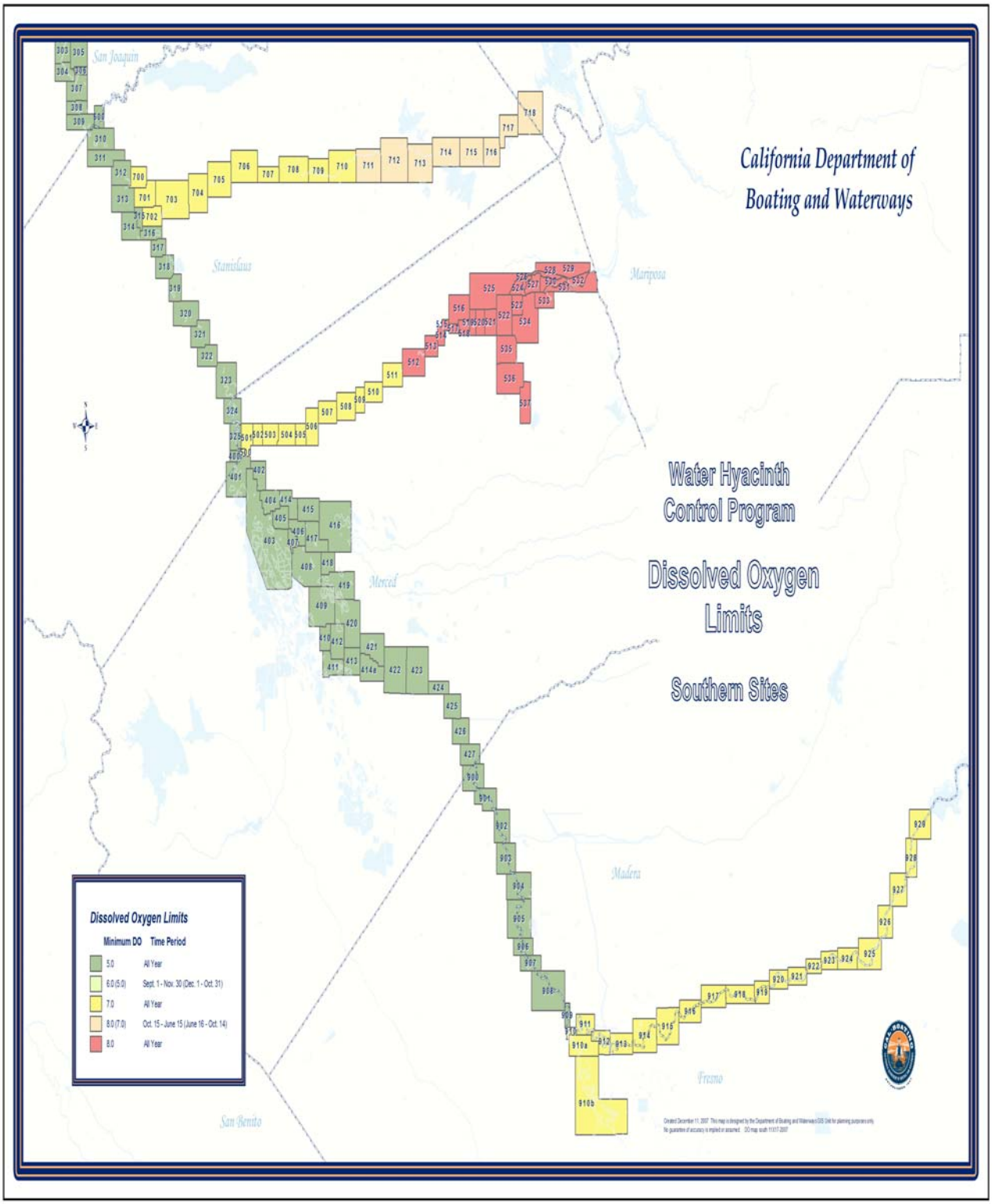


Figure 1-6. Water Hyacinth Control Program Dissolved Oxygen Limits: Southern Sites



2 COMPLIANCE

2.1 *Summary of Regulatory Permits*

The following constitutes a summary of the permits required to implement the WHCP. Each permit has regulations that are designed to ensure avoidance or minimization of significant impacts to beneficial uses of waters of the U.S or federally threatened and endangered species protected by the Endangered Species Act.

2.1.1 Reporting Requirements

The NPDES Statewide General Permit for Aquatic Pesticide Use requires the DBW to submit an annual report March 1 following the WHCP application season. Reporting per NPDES guidelines must include an executive summary discussing permit compliance or violation of permit terms and conditions to beneficial waters of the U.S., the effectiveness of the WHCP Operation Management Plan (OMP), the discharge of pollutants associated with aquatic pesticide applications, summarize monitoring data, including changes to water quality, and violations of compliance with water quality objectives as outlined in the Central Valley Basin Plan issued by the CVRWQCB, identification of Best Management Practices (BMP's) and their effectiveness in meeting permit requirements, a discussion of modifications or management corrections for any violations that occurred, maps showing application area, acreage and sampling station stations, types and amounts of aquatic pesticides used at each application event, information on surface area, volume and rate of application, and sampling results for all required monitoring.

Both the WHCP USFWS BO/Take Permit and the WHCP NOAA Fisheries BO/Take Permit require annual reports to be submitted January 31, following the application season. These reports must summarize compliance with the terms and conditions listed including species and habitat protection, water quality monitoring, and any additional monitoring and studies that may have been conducted as part of regulatory requirements from other participating state or federal agencies. Additional reporting requirements are on a case-by-case basis in the event that a *take* should occur with any of the species discussed in these permits. *Take* reports begin with immediate notification to the USFWS or NOAA biologist (based on jurisdiction) in charge of administering this permit and require legal documentation of information, such as where *take* occurred, number of species, water quality conditions, chain of custody, and prescriptive action for preventing future occurrences.

2.1.2 Statewide General NPDES Permit [Permit No. CAG990005]

Below is a summary of the provisions of the Statewide General NPDES Permit. A complete copy of the permit is available upon request.

RECEIVING WATERS

There is a clear distinction in the NPDES about application area, treatment area, and receiving waters. In the NPDES, an application area is defined as the area in which aquatic pesticides are directly applied. The treatment area is the area that is treated by the aquatic pesticide to control weeds. It is the responsibility of the Control Agency to define the treatment area. The receiving waters are defined in two manners: 1) waters directly down flow of the treatment area and 2) waters within the treatment area when herbicide residue levels fall below minimum effective concentrations. As the WHCP sprays on floating plants

and does not inject to treat submerged plants, the application and treatment areas are effectively the same geographic place.

Herbicides applied to aquatic plants are not considered a pollutant until residues reach receiving waters. This is because an herbicide designed to treat aquatic plants and approved by the EPA cannot also be a pollutant under the Clean Water Act when it is doing what it was designed and approved to do under federal pesticide use regulations.

NUMERIC LIMITS

The following is a summary of the numeric limits required under the NPDES permit. Figures 1-5 and 1-6, geographically show where these basin limits occur in the WHCP project area.

Dissolved Oxygen:

Within the legal boundaries of the Delta, the dissolved oxygen concentration shall not be reduced below:

7.0 mg/l in the Sacramento River (below the I Street Bridge) and in all Delta waters west of the Antioch Bridge;
6.0 mg/l in the San Joaquin River (between Turner Cut and Stockton, 1 September through 30 November); and
5.0 mg/l in all other Delta waters.

For surface water bodies outside the legal boundaries of the Delta, the monthly median of the mean daily dissolved oxygen (DO) concentration shall not fall below 85 percent of saturation in the main water mass, and the 95-percentile concentration shall not fall below 75 percent of saturation. The dissolved oxygen concentrations shall not be reduced below the following minimum levels at any time:

Waters designated WARM 5.0 mg/l
Waters designated COLD 7.0 mg/l
Waters designated SPWN 7.0 mg/l

In the water bodies listed below, dissolved oxygen concentrations shall not be reduced below the amount indicated during the stated time period.

SPECIFIC DISSOLVED OXYGEN WATER QUALITY OBJECTIVES

Amount	Time	Place
9.0 mg/l *	1 June to 31 August	Sacramento River from Keswick Dam to Hamilton City (13)
8.0 mg/l	1 September to 31 May	Feather River from Fish Barrier Dam at Oroville to Honcut Creek (40)
8.0 mg/l	all year	Merced River from Cressy to New Exchequer Dam (78)
8.0 mg/l	15 October to 15 June	Tuolumne River from Waterford to La Grange (86)

* When natural conditions lower dissolved oxygen below this level, the concentration shall be maintained at or above 95 percent of saturation.

2.1.3 WHCP USFWS BO/Section 7 Take Permit [Permit No. 1-1-04-0149]

Below is a summary of the terms and conditions required under this Biological Opinion. A complete copy of the BO is available upon request.

DELTA SMELT

Page 46, WHCP USFWS Sect 7 Permit (1-1-03-F-0114), items a-b and 6 outline specific mitigation measures to minimize impact to *Hypomesus transpacificus* (Delta smelt) and associated habitats.

Avoidance

There is no longer any start or end date restrictions for the use of the herbicides 2,4-D, glyphosate and the adjuvant Agridex® in Delta smelt habitat.

Toxicity evaluation

In the 2001 WHCP USFWS permit, the DBW was directed to determine the level of impact that WHCP herbicides might have on the Delta smelt. These impacts were to be determined for critical life stages only. Originally, the USFWS Permit required egg and larvae 96-hr. definitive toxicity tests and "live-car" exposure studies. It was later determined by the USFWS that only 96-hr. definitive studies on larvae were necessary. It was also determined that 96-hr. acute toxicity tests using application-exposed field water from treatment sites was acceptable in lieu of live car studies. Both studies for Delta smelt were completed and submitted to the USFWS in March 2004. After evaluation of these reports in the spring of 2004, the USFWS determined that acute exposure from 2,4-D, glyphosate and Agridex® does not cause significant impacts and issued new terms and conditions for unrestricted use of these two herbicides and one adjuvant.

VALLEY ELDERBERRY LONGHORN BEETLE

Page 47, WHCP USFWS Sect 7 Permit (1-1-03-F-0114), items 8-10 outline specific mitigation measures to minimize impact to *Desmocerus californicus dimorphus,* Valley elderberry long horn beetle, (VELB) and associated Elderberry shrug (*Sambucus sp*.) habitat.

Avoidance

The DBW was directed to avoid impact to VELB by surveying for *Sambucus ssp*. (elderberry tree), and treating at low tide if any elderberry trees are within 100' of water's edge. In areas where treatment cannot occur away from habitat, a maximum of one-half of the area may be treated at one time. Wind speed and direction are also factors as to whether or not a treatment could occur in these areas.

Environmental training

The permit requires that personnel involved with the WHCP will receive USFWS approved worker environmental awareness training. Under the training program, personnel will be informed about the presence of VELB and habitat associated with the species including 1) the life history of VELB, 2) the importance of elderberry shrubs as habitat 3) that unlawful *take* is a violation of the Endangered Species Act (ESA), and 4) all terms and conditions of the 2004 USFWS WHCP BO for protection, avoidance and minimization of impacts to protected species under ESA.

GIANT GARTER SNAKE

Page 47, WHCP USFWS Sect 7 Permit (1-1-03-F-0114), items 5-7 outline specific mitigation measures to minimize impact to *Thamnophis gigas* (giant garter snake).

Avoidance

The only restrictions to giant garter snakes in the 2004 USFWS WHCP BO apply to any land based operations, which occur on Delta banks other than existing roads or boat ramps. Currently all operations occur on existing roadways or boat ramps. However, mitigation measures beyond the requirements of the 2004 USFWS permit have been implemented to avoid impacts to giant garter snakes and their habitat. All of the WHCP project area has had a giant garter snake habitat evaluation. This evaluation has been incorporated into the GIS technology used by application crews. The application crews have also been provided with a set of maps so that they can minimize impact where giant garter snakes are most likely to be found.

Toxicity Evaluation

The 2001 WHCP USFWS permit required tests to evaluate acute toxicity of a representative species of garter snakes. The DBW conducted oral and dermal exposure tests using the program herbicides and adjuvant on *Thamnophis elegans* (mountain garter snake) and *Thamnophis sirtalis* (common garter snake) in the spring of 2003. A final report of this study was submitted to the USFWS in the spring of 2004. The study found there were no observable effects to these two species when oral and dermal exposure was at maximum label concentrations. A final report of this study was submitted to the USFWS in the spring of 2004. Results of this study were incorporated into the USFWS 2004 EDCP BO/*Take* Permit. A copy of this report is available upon request.

Environmental Training

The permit requires that personnel involved with the WHCP will receive USFWS approved worker environmental awareness training. Under the training program, personnel will be informed about the presence of giant garter snake (*Thamnophis gigas*) and habitat associated with the species including: 1) the life history of the giant garter snake, 2) the importance of irrigation canals, marshes/wetlands, and seasonally flooded areas to the giant garter snake, 3) that unlawful *take* is a violation of the Endangered Species Act (ESA), and 4) all terms and conditions of the USFWS WHCP BO for protection, avoidance and minimization of impacts to protected species under ESA.

2.1.4 WHCP NOAA Fisheries BO/Sec. 7 Permit [151422SWR2005SA00681:JSS]

Below is a summary of the terms and conditions required under this Biological Opinion. A complete copy of the BO is available upon request.

SACRAMENTO RIVER WINTER-RUN CHINOOK SALMON, CENTRAL VALLEY SPRING-RUN CHINOOK SALMON AND CENTRAL VALLEY STEELHEAD TROUT

The Biological Opinion outlines specific mitigation measures to minimize impact to *Oncorynchus tshawytscha* (Sacramento River winter-run Chinook salmon & Central Valley spring-run Chinook salmon) and *Oncorynchus mykiss* (Central Valley steelhead trout).

Avoidance

The NOAA Fisheries BO notes that, dependent upon type of year and in-stream flows; juvenile steelhead may be present in the Delta through May and spring-run Chinook salmon through June. The DBW was permitted to apply beginning April 1 in stations that are not considered salmon habitat. The permit lists the following as April 1 start date stations: the San Joaquin River upstream of the confluence with the Merced River (Hills Ferry), associated sloughs and canals in Merced and Fresno Counties and the following Central Delta eastside stations: Fourteen Mile Slough east of Shima Tract, Pixley Slough, Rio Blanco Tract, White and Disappointment Slough east of Honker Cut, Sycamore Slough, Hog Slough, Beaver Slough, Lost Slough, Snodgrass Slough above the Delta Cross Channel, and the Stone/Beach Lakes Area. April 15 start dates applied to portions of the South Delta within the portions of the Middle and Old River behind the South Delta Temporary Barriers. The remainder of the action area may be treated after June 1, provided that IEP Real-Time Monitoring shows the pulse has migrated through the system, increase in water temperatures prohibit species survival, and NOAA Fisheries issued written verification.

Toxicity Evaluation

The permit does not require species-specific or EPA standard 3-species toxicity evaluations.

Environmental Education

The permit no longer contains education mitigation. However, it does require that DBW staff and assigned agents follow all Federal and State laws applicable to the use of herbicides including mitigation outlined in the current EDCP BO/*Take* permit. Thus, the DBW continues to require applicators to be informed about the presence of salmon, steelhead, and habitat associated with the species including: 1) the life history, 2) the importance of migratory routes; and 3) the terms and conditions of the biological opinion.

Fish Passage Protocol

There are specific guidelines for ensuring fish are not impacted by WHCP applications. The following practices are incorporated into the WHCP Protocols and Procedures Manual to ensure fish passage: applicators may only treat 3 acres or less per site, maintain buffer zones, treat at specific dissolved oxygen levels, and never block escape routes. Each WHCP crew received a copy of the protocol and refresher training on the Fish Passage Protocol before the 2008 application season began.

2.2 *Measuring Extent of Infestation and Treatment Strategies*

Figure 1-4 shows the number of acres treated from 1988 to 2008. There was no water hyacinth treatment in 2000 as the program was the subject of legal and regulatory changes, which prevented treatment during that year. The number of acres treated in a given year

can reflect the magnitude of infestation; however, other factors can affect the amount of treatment that occurs (regulatory limits, local conditions, weather, and staff levels).

3 PERSONNEL, MATERIALS AND METHODS

3.1 *Personnel*

3.1.1 Application Crews

During 2008, the DBW had six full-time crews, each consisting of a specialist and a technician, which carried out herbicide application activities. Similarly, under contract with DBW, Merced and Fresno Counties each have one crew that conduct treatment activities for the 2008 WHCP. Each crew contains a minimum of one member possessing a Qualified Applicators Certificate, category "F" (aquatics), administered by the California Department of Pesticide Regulation.

APPLICATION PERSONNEL EDUCATION AND TRAINING

Qualified Applicator Certificate

DBW field crewmembers attended the 2008 California Department of Fish and Game Pesticide Applicators Seminar from March 4th through March 6th, 2008 for continuing education credit. Additionally, field crewmembers also attended an Aquatic Weed School on September 16th and 17th 2008, hosted by U.C.Davis.

Environmental Awareness Training

As per WHCP USFWS Sect 7 Permit (1-1-03-F-0114) Condition 5 and 10 and WHCP NOAA Fisheries Sect. 7 Permit (151422SWR2005SA00681:JSS) Section II (C) (3), environmental awareness training was conducted March 26th, 2008. This training included the following items.

- Species identification and impact avoidance guidelines on all threatened and endangered species associated with the WHCP
- Identification and protection of elderberry trees (*Sambucus ssp.*) and protocol for monitoring species fitness during an application season
- Identification and protection of the giant garter snake (*Thamnophis couchi gigas*), including life history; importance of irrigation canals, marshes, wetlands, and seasonally flooded areas as habitat; and the terms and conditions of the biological opinion
- Identification and protection of Delta smelt (*Hypomesus transpacificus*), Chinook salmon (*Oncorhynchus tshawwtscha*), steelhead (*Oncorhynchus mykiss*), and associated protected habitats, closure dates, and other agency requirements
- Protocol for "take," including reviewing the "Incidental Take Statement," collection and handling of dead species, completion of chains of custody, and notification of either the USFWS or NOAA Fisheries

Equipment Training

Refresher training on the use/calibration of the DO meters, use of the Xplore iX104C® GPS system, and ArcPad application took place on April 7th, 2008.

3.1.2 Monitoring Personnel

Monitoring activities are overseen by an environmental scientist and conducted by qualified personnel, which may include an environmental scientist and scientific aids. All water sampling events are carried out in accordance with the WHCP Quality Assurance Project Plan (QAPP) and the WHCP environmental monitoring protocol as approved by the Central Valley Regional Water Board, NOAA Fisheries and USFWS.

Environmental scientists are responsible for understanding and adhering to the permit and biological opinion terms and conditions. They are also responsible for training other monitoring crewmembers concerning monitoring protocols, water sampling techniques, and the calibration and use of field equipment necessary to collect accurate data. Paul Ryan, Environmental Scientist, conducted monitoring training for all monitoring personnel during 2008 on environmental monitoring and field equipment protocols.

3.2 *Materials*

3.2.1 Herbicide Application

HERBICIDES AND ADJUVANT

The herbicides used in 2008 by the WHCP include the following.

Herbicides

- 2,4-Dichlorophenoxyacetic acid, dimethylamine salt (2,4-D) (Weedar® 64). EPA Registration Number 71368-1.
- Glyphosate (N-(phosphonmethyl) glycine, in the form of isopropylamine salt) (Rodeo® Herbicide; Aquamaster®). EPA Registration Number 524-343-ZF

Adjuvant

- Agridex® (active ingredients: paraffin base petroleum oil and polyoxyethylate polyol fatty acid esters). California State Registration 5905-50017-AA.

APPLICATION EQUIPMENT

The application of herbicides in 2008 is conducted with hand held sprayers operated from 16 to 21 foot air or outboard aluminum boats. The boats are equipped for direct metering of herbicides, adjuvant and water into the pump system of the spraying unit.

Each crew uses a Hach® HQ-10 Dissolved Oxygen Meter and an Xplore iX104C® GPS system to record pre-spray and post-spray temperature, dissolved oxygen, start/end UTM coordinates, amount of herbicide used, acreage treated, and date/time of treatment.

3.2.2 Environmental Monitoring

MONITORING EQUIPMENT

A 19-21 foot air or outboard aluminum boat is used for monitoring activities. New boats were purchased for sampling and have never been used for herbicide applications.

Water samples are collected using a small electrical bilge pump connected to approximately 20 feet of ½ inch Teflon-lined tubing. A Teflon “Y” is inserted to create two equal flows for duplicates and splits. Amber sampling bottles provided by the contracted laboratories are used to collect water samples. Disposable gloves are worn when collecting samples.

Water quality parameters are measured with a Hydrolab® Model MS5 mini datasonde. Water quality parameters measured by the Hydrolab® are geographically referenced with a Trimble® GPS unit and captured electronically using Hydroplus® software specifically modified for the WHCP. All data are backed up on hardcopy and used for data validation purposes. A digital camera, the Canon® 560A, is used to provide visual records of sampling locations and other notable factors that may affect water quality or species of concern. Sites may be flagged for quick identification in the future.

3.3 *Methods*

3.3.1 Herbicide Application

WHCP Operation Management Plan

The WHCP has instituted an Operations Management Plan (WHCP OMP). This WHCP OMP details general requirements, a pre-application planning protocol, application/monitoring coordination protocol, the application protocol and Best Management Practices (BMP) for herbicide handling, spray equipment maintenance and calibration, spill contingency plan, Delta smelt avoidance, Chinook salmon avoidance, giant garter snake habitat evaluation, dissolved oxygen/temperature measurement, fish passage protocol, daily log completion, and GPS data download and use.

Site Selection

Following the terms and conditions specified in the NPDES permit and biological opinions the sites available for treatment on April 1, included sites 214-239, 203, 205, 207, 401-427, and 900-929. On June 1, sites open for treatment include 500-501 and 706-718 depending on the Interagency Ecological Program (IEP) data showing the absence of special status fish species. On July 1, all treatment sites were open for herbicide treatment. Figures 1-2 and 1-3 are maps showing the sites and their corresponding starts dates. Sites selected for treatment were based on impacts to navigation, threats to agricultural pumping facilities, and high levels of infestation. During the 2008 WHCP, site selection criteria also included information and concerns received from area residents and business owners.

Equipment Maintenance

Spray equipment was calibrated on a weekly basis, after changing injection pumps, and when there were apparent problems with the equipment. Injection systems were cleaned daily and hoses were cleaned as needed. Pump oil was changed every 50 hours. Boat maintenance was conducted on a regular basis; boat maintenance records are available upon request.

3.3.2 Monitoring

Water Hyacinth Control Program NPDES Annual Monitoring Protocol

All WHCP water quality monitoring follows the WHCP NDPES Annual Monitoring Protocol as outlined in the WHCP Aquatic Pesticide Application Plan, which was approved in 2006 by the Central Valley Regional Water Quality Control Board. Quality control and quality analysis measures are outlined in the WHCP Quality Assurance Project Plan (QAPP). Monitoring activities include recording WHCP impacts on beneficial waters of the United States, federally listed endangered species, and associated endangered species habitats. DBW is required to document residues in receiving waters and monitor water quality

parameters such as dissolved oxygen, temperature, conductivity, pH, and turbidity at representative locations.

SITE SELECTION

Monitoring sites have been selected based on requirements listed under the NPDES permit and biological opinions issued by the USFWS and NOAA Fisheries, which are outlined below.

- *NPDES Permit Monitoring Site Selection Criteria*

  The SWRCB Statewide General NPDES Permit requires that dischargers monitor a certain proportion of sites based on the number of sites treated. Sites treated under the Water Hyacinth Control Program (WHCP) shall be classified by the DBW as falling into one of two site types:
  - Tidal
  - Riverine

  For each aquatic pesticide used, the DBW will monitor 10 percent of the sites it treats with that aquatic pesticide (per water body type). The DBW will determine the number of sites that it will monitor in a given year by multiplying 10 percent by the average number of sites treated over the previous three years (i.e., a three-year moving average). In this way, the DBW will be able to properly plan and schedule its sampling for the treatment year.

  The DBW will conduct the monitoring in a way that ensures that every chemical (i.e., both aquatic herbicides and adjuvant) used for the WHCP will be subject to chemical residue monitoring at least once each year.

  . The following species are covered in this permit: giant garter snake (GGS) (The NDPES permit also requires that areas treated with the most herbicide be selected as representative sites. All application sites have been ranked based on the average amount of herbicide used for the years 2005-2007. Monitoring sites will be selected from the top 25%.

  Table 3-1 shows lists the 2008 WHCP monitoring sites.

- *USFWS Biological Opinion Monitoring Site Selection Criteria*

  The USFWS mitigation requires that representative monitoring occur in two sites per species (per season) with favorable habitat for that species*Thamnophis gigas*), Delta smelt (*Hypomesus transpacificus*), valley elderberry longhorn beetle (VELB) (*Desmocerus californicus dimorphus*).

The locations of the sites monitored in 2008 are mapped in Figure 1-1.

Table 3-2 shows how the selected sites meet the selection requirements for the habitat quality for each of the listed species. Giant garter snake habitat has been rated as low, medium or high, while VELB and smelt habitat is classified as being absent or present based on the known distribution of smelt and the known locations of valley elderberry trees in the project area.

Table 3-1. 2008 WHCP Monitoring Sites

Site	Water body Type	Chemicals
043 – Little Connection Sl.	Tidal	2,4-D/Agridex
044 – Little Connection Sl.	Tidal	2,4-D/Agridex
201 - Mokelumne River	Tidal	Glyphosate/Agridex
202 - Mokelumne River	Tidal	Glyphosate/Agridex
215 - Snodgrass Slough	Tidal	Glyphosate/Agridex
216 - Snodgrass Slough	Tidal	Glyphosate/Agridex
309 - San Joaquin River	Riverine	2,4-D/Agridex
312 – San Joaquin River	Riverine	2,4-D/Agridex
313 – San Joaquin River	Riverine	2,4-D/Agridex
700 – Tuolumne River	Riverine	2,4-D/Agridex
701 – Tuolumne River	Riverine	2,4-D/Agridex
706 – Tuolumne River	Riverine	2,4-D/Agridex
707 – Tuolumne River	Riverine	2,4-D/Agridex

Table 3-2. 2008 WHCP Monitoring Sites and Habitat Quality

Site	GGS Habitat Quality	Smelt Habitat	VELB Habitat
043 – Little Connection Sl.	Low	Present	Absent
044 – Little Connection Sl.	Low - Moderate	Present	Absent
201 - Mokelumne River	Low	Present	Present
202 - Mokelumne River	Moderate	Present	Present
215 - Snodgrass Slough	High - Moderate	Present	Absent
216 - Snodgrass Slough	Low - Moderate	Present	Absent
309 - San Joaquin River	Low	Absent	Absent
312 – San Joaquin River	Low	Absent	Absent
313 – San Joaquin River	Low	Absent	Absent
700 – Tuolumne River	Low	Absent	Present
701 – Tuolumne River	Low	Absent	Present
706 – Tuolumne River	Low	Absent	Present
707 – Tuolumne River	Moderate	Absent	Present

EQUIPMENT CALIBRATION AND MAINTENANCE

To avoid contamination, boats used for monitoring are not used for spray treatments and are periodically washed. A blank sample (de-ionized water collected using the sampling device) is collected at every sampling event to detect potential contamination. To ensure that water quality data is reliable, Hydrolabs® are calibrated on a regular basis based on the manufacturer's requirements.

3.3.3 Contract Laboratory Standard Operating Procedures

The analytical methods used by the contract laboratories are published in the U.S. EPA Test Methods for Evaluating Solid Waste Physical/Chemical SW 846 or U.S. EPA Method for Chemical Analysis of Water and Waste. The primary method used for the WHCP is the Method 8270/625 (or equivalent) by GC/MS.

For the 2,4-D GC/MS analysis, a linear calibration with options of using an average response factor or a linear regression is specified. An initial five-point calibration curve is completed, where the low-level standard concentration is less than or equal to the analyte quantization limits. Glyphosate and Agridex undergo liquid chromatographic analysis with the same 5 point calibration curve. The 2,4-D results are also compared to percent recovery of the surrogate chemical 3,4-D to ensure accuracy of results. There are no comparable surrogates for glyphosate and Agridex at this time.

4 MONITORING RESULTS AND DISCUSSION

4.1 *Endangered Species*

At no time during 2008, was there any known “take” or harassment of any protected species as a result of WHCP activities.

4.2 *Herbicide Application Data*

Each crew completes a daily log to record herbicide treatment activities. The 2008 WHCP daily log information along can be found in Appendix A.

Herbicide applications may be made only when DO levels are either above the Basin Plan limit adopted by the Central Valley Regional Water Quality Control Board or below 3.0 mg/L. Basin plan DO limits for the entire WHCP project area are shown in Figures 1-5 and 1-6.

4.3 *Monitoring Data and Laboratory Results*

All WHCP water quality monitoring follows the WHCP NDPES Annual Monitoring Protocol as outlined in the WHCP Aquatic Pesticide Application Plan, which was approved in 2006 by the Central Valley Regional Water Quality Control Board. Quality control and quality analysis measures are outlined in the WHCP Quality Assurance Project Plan (QAPP). Monitoring activities include recording WHCP impacts on beneficial waters of the United States, federally listed endangered species, and associated endangered species habitats. DBW is required to document residues in receiving waters and monitor water quality parameters such as dissolved oxygen, temperature, conductivity, pH and turbidity at representative locations.

The NPDES permit has identified receiving water limitations of herbicide concentrations, dissolved oxygen, turbidity, and pH restrictions. The USFWS and NOAA Fisheries BO’s have adopted water quality limitations identified in the NPDES permit, established take limits for threatened and endangered species, and outlined the terms and conditions necessary to minimize the impact of incidental take on threatened and endangered species.

Sampling stations at all representative locations are identified as “A,” “B,” and “C.” Sampling station “A” represents the treatment area where water hyacinth was treated (1A: Treatment Area Pre-Treatment). Sampling station “B” represents receiving water that is downstream from the treatment area (2B: Receiving Water Post-Treatment). Sampling station “C” represents a control site that is sampled before herbicide treatment upstream of the treatment area (1C: Upstream Pre-Treatment). In addition to sampling on the day treatment occurred, follow up sampling was conducted at the same locations (designated as 3C, 3A and 3B) within 7 days after treatment.

The complete set of site maps, data (both field and lab data) collected to measure the parameters identified in the NPDES permit and BO’s for the selected monitoring sites have been summarized and placed in Appendix B.

4.3.1 Dissolved Oxygen

The Basin Plan limits for receiving water dissolved oxygen levels are shown in Figures 1-5 and 1-6.

D.B.W., and agencies working under D.B.W., did not have any occurrences where the Basin Plan D.O. limits were exceeded.

4.3.2 Turbidity

Basin Plan standards for turbidity are as follows:

> "*The discharge shall not cause the following in the receiving water:...*
> *…The 30-day average turbidity to increase as follows:*
>
> *a. More than 1 Nephelometric Turbidity Units (NTU) where natural turbidity is between 0 and 5 NTUs.*
> *b. More than 20 percent where natural turbidity is between 5 and 50 NTUs.*
> *c. More than 10 NTUs where natural turbidity is between 50 and 100 NTUs.*
> *d. More than 10 percent where natural turbidity is over 100 NTUs*

Since sites are not monitored for 30 days, the average of the turbidity measurements taken at the "A" and "C" locations on the sampling day in question will constitute the 30-day average against which the receiving water ("B" location) measurements will be compared.

On seven occasions, in five different sites, turbidity levels exceeded basin plan limits. On three occasions, the turbidity levels returned to levels acceptable within the basin plan on the follow up visit. In three other occasions, the turbidity levels on follow ups were still high, but consistent with the readings on the treatment dates. The last occasion the reading was so high that, there was a probability there was a problem with the instrument at that particular time. Types of variables encountered in each sampling event could include; areas where it was very shallow or there were many submerged aquatic plants, agricultural discharges, inputs from more turbid tributaries, wading livestock or instrument error.

4.3.3 PH

The Basin Plan Limit for pH is the following:

> "*The discharge shall not cause the following in the receiving water:...*
> *…The ambient pH to fall below 6.5, exceeds 8.5, or change by more than 0.5 units*"

During the 2008 monitoring season, all measured pH levels complied with basin plan limits.

4.3.4 Herbicide Residue Concentrations

Chemical Concentrations

Maximum residue limits are based on the Environmental Protection Agency (EPA) municipal drinking water standards. The herbicide shall not exceed the following concentrations in receiving waters:

Chemical	Concentration
2, 4-D	70 µg/L
Glyphosate	700 µg/L

During 2008, all herbicide (and Agridex) residue concentrations at receiving water locations were all below (or not detected) limits specified in the WHCP NPDES permit.

4.4 *Special Studies*

4.4.1 UC Davis Hyper-spectral Study

In order to better quantify the extent of water hyacinth infestation and identify "hot spots" for priority treatments, the DBW is currently working with UC Davis on a multiple year hyper-spectral study. Hyper-spectral analysis uses remotely sensed data and identifies and quantifies the extent of given vegetation type (or individual species) based on its unique reflective signature. It is hoped that the results of this study will enable the WHCP to make accurate estimates of water hyacinth acreage, better prioritize treatment and provide a method by which accurate year to year comparisons of the extent of infestation and treatment efficacy may be made. Final results of the study are not yet available.

4.4.2 Valley Elderberry Longhorn Beetle Habitat Monitoring

The Water Hyacinth Control Program U.S. Fish and Wildlife Service (USFWS) Biological Opinion Take Permit Terms and Conditions require monitoring of the Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) elderberry shrub (*Sambucus sp*.) habitat before and after applications to ensure there were no significant impacts from the WHCP. In 2003, the Department of Boating and Waterways (DBW) proposed an alternate three-year quantitative study. A draft was submitted to Mike Nepstad in February of 2003 and the Biological Opinion (BO) was amended on March twenty-fourth of 2003 to accept the Elderberry Shrub Monitoring Protocol (available upon request) and new study. This elderberry-monitoring study will allow the DBW to continue monitoring and assess the effects of the WHCP herbicide applications on elderberry shrubs that are adjacent to waterways being treated. The data for year three of the study was collected during 2006. The data is inconclusive and DBW has made the decision to return to the original protocol approved by USFWS (original BO). This decision is based mainly on the fact that the plants are hard to access in the spring when they are blooming and this makes the current protocol ineffective to measure beetle habitat.

4.4.3 Handpicking Cost-Benefit Analysis

Due to time restrictions and treatment limitations for the chemical application of water hyacinth, the Handpicking Program has been implemented as part of the WHCP's integrated pest management plan. The goals of the Handpicking Program are to aid in the control of water hyacinth by clearing areas that are 1) not accessible to chemical treatment, 2) subject to high infestation, and 3) within emergent vegetation to reduce the impacts of chemical application. Specific protocols have been established to ensure the protection of water quality and protected species. Copies of the WHCP Handpicking Protocols are available upon request. It is hoped that this method will reduce overall chemical use by the WHCP and, potentially, eliminate the need for chemical application in some areas.

4.4.4 C.D.F.A. Study

D.B.W. is currently funding a study with C.D.F.A. that is looking for naturally occurring pathogens that could be used in the future as a bio-control option in the Water Hyacinth Program.

APPENDIX A

2008 WHCP Herbicide Application Daily Logs

April 2008 Daily Logs

Date	Crew	Site ID	County	Before Temp	After Temp	DO Before	DO After	Glyphosate (Gals.)	AgriDex (Gals.)	Chem. Rate	Glyphosate Acres
4/1/2008	FR	929	FR	18.2	18.2	2.8	2.8	0.05	0.05	50	0.064

May 2008
Daily Logs

Date	Crew	County	DO Before	DO After	2, 4-D (Gals.)	Glyphosate (Gals.)	AgriDex (Gals.)	Chem. Rate	2,4-D Acres	Glyphosate Acres
5/1/2008	FR	FR	1.2	1.2		0.05	0.05	50		0.064
5/16/2008	MER	MER	13.6	16.8	0.14		0.07		0.14	
5/16/2008	MER	MER	16.8	18.8	0.17		0.09		0.17	
5/19/2008	MER	MER	8.8	8.7	0.03		0.02		0.03	
5/19/2008	MER	MER	8.7	8.3	0.20		0.10		0.20	
5/28/2008	MP	SAC	8.0	9.8		1.75	0.50	48		2.33
5/7/2008	MP	SAC	8.0	8.3		0.50	0.25	48		0.67
5/5/2008	MP	SAC	8.7	8.5		1.50	0.25	48		2.00
						3.75	1.00		0.54	5.00

June 2008 Daily Logs

Date	Site ID	County	DO Before	DO After	2, 4-D (Gals.)	Glyphosate (Gals.)	AgriDex (Gals.)	Chem. Rate	2,4-D Acres	Glyphosate Acres
6/12/2008	520	MER	8.1	9.7		0.75	0.25	48		1.00
6/12/2008	521	MER	10.5	9.1		1.75	0.50	48		2.33
6/9/2008	520	MER	9.2	8.6	0.08		0.04	32	0.08	
6/9/2008	521	MER	8.6	9.1	0.28		0.14	32	0.28	
					0.36		0.18		0.36	

July 2008
Daily Logs

Date	Site ID	County	DO Before	DO After	2, 4-D (Gals.)	Glyphosate (Gals.)	AgriDex (Gals.)	Chem. Rate	2,4-D Acres	Glyphosate Acres
7/17/2008	40	SJ	5.2	8.3	0.50		0.25	32	0.50	
7/21/2008	15	SJ	7.2	7.8	1.00		0.50	32	1.00	
7/21/2008	14	SJ	5.9	2.8	1.00		0.50	32	1.00	
7/21/2008	32	SJ	7.9	7.2	0.50		0.25	32	0.50	
7/22/2008	15	SJ	7.6	8.1	2.00		1.00	32	2.00	
7/23/2008	37	SJ	7.1	7.2		1.50	0.50	48		2.00
7/23/2008	28	SJ	6.4	7.8	0.75		0.25	32	0.75	
7/7/2008	929	FR	1.3	1.3		0.05	0.05	50		0.06
7/8/2008	911	FR	2.3	2.3		0.05	0.05	50		0.06
7/9/2008	904	FR	2.8	2.8		0.05	0.05	50		0.06
7/9/2008	903	FR	2.8	2.8		0.05	0.05	50		0.06
7/9/2008	115	CC	6.3	7.2	2.00		1.00	32	2.00	
7/21/2008	115	CC	6.1	6.3	2.00		1.00	32	2.00	
7/21/2008	113	CC	6.3	6.4	2.00		1.00	32	2.00	
7/21/2008	114	CC	6.2	6.5	1.00		0.50	32	1.00	
7/22/2008	121	CC	8.5	8.6	1.50		0.75	32	1.50	
7/22/2008	123	SAC	7.1	7.3	1.00		0.50	32	1.00	
7/23/2008	115	CC	8.0	8.5	2.00		1.00	32	2.00	
7/24/2008	115	CC	7.7	8.2	2.00		1.00	32	2.00	
7/28/2008	121	SAC	8.5	8.3	2.50		1.25	32	2.50	
7/29/2008	125	SAC	7.2	7.4	0.50		0.25	32	0.50	
7/29/2008	123	SAC	7.2	7.6	2.00		1.00	32	2.00	
7/30/2008	107	CC	7.2	7.5	1.00		0.50	32	1.00	
7/31/2008	117	CC	9.0	8.6	0.50		0.25	32	0.50	
7/31/2008	112	CC	8.8	9.0	1.00		0.50	32	1.00	
7/21/2008	62	SJ	8.0	8.6	2.00		1.00	32	2.00	
7/23/2008	14	SJ	8.6	8.0	2.75		1.00	32	2.75	
7/23/2008	16	SJ	7.6	7.4	0.50		0.25	32	0.50	
7/24/2008	61	SJ	8.2	8.1	0.50		0.25	32	0.50	
7/29/2008	62	SJ	7.8	7.2	0.25		0.05	32	0.25	
7/29/2008	61	SJ	8.7	8.3	1.75		1.00	32	1.75	
7/29/2008	14	SJ	8.1	8.4	1.50		1.00	32	1.50	
7/31/2008	13	SJ	7.6	7.3	1.50		0.50	32	1.50	
7/22/2008	262	SOL	6.8	7.2		0.50	0.25	48		0.67
7/22/2008	277	SOL	7.5	7.3		0.50	0.25	48		0.67
7/29/2008	203	SJ	7.1	7.3		2.00	1.00	48		2.67
7/30/2008	200	SJ	6.8	7.2		1.00	0.50	48		1.33
7/30/2008	204	SJ	7.0	7.3		0.50	0.25	48		0.67
7/31/2008	102	CC	7.7	6.9	0.25		0.13	32	0.25	
7/31/2008	98	SJ	7.2	7.5	0.25		0.13	32	0.25	
7/23/2008	20	SAC	6.9	7.5	1.50		0.75	32	1.50	
7/23/2008	18	SAC	7.3	7.1	0.50		0.25	32	0.50	
7/1/2008	528	MER	11.4	12.6	0.05		0.02	32	0.05	

7/1/2008	526	MER	12.6	11.9	0.02		0.01	32	0.02	
7/2/2008	524	MER	9.5	10.7	0.02		0.01	32	0.02	
7/2/2008	523	MER	10.7	12.6	0.03		0.02	32	0.03	
7/2/2008	522	MER	12.6	12.0	0.03		0.02	32	0.03	
7/7/2008	521	MER	11.2	9.4	0.03		0.02	32	0.03	
7/7/2008	520	MER	9.4	9.3	0.02		0.01	32	0.02	
7/7/2008	519	MER	9.3	10.0	0.02		0.01	32	0.02	
7/7/2008	518	MER	10.0	12.1	0.02		0.01	32	0.02	
7/8/2008	517	MER	8.9	9.1	0.02		0.01	32	0.02	
7/8/2008	515	MER	9.1	9.9	0.03		0.02	32	0.03	
7/8/2008	514	MER	9.9	9.9	0.05		0.02	32	0.05	
7/10/2008	513	MER	8.6	10.1	0.03		0.02	32	0.03	
7/10/2008	512	MER	10.1	8.3	0.02		0.01	32	0.02	
7/10/2008	511	MER	8.3	10.7	0.02		0.01	32	0.02	
7/11/2008	510	MER	8.0	8.4	0.02		0.01	32	0.02	
7/11/2008	508	MER	8.4	9.2	0.02		0.01	32	0.02	
7/11/2008	507	MER	9.2	9.2	0.03		0.02	32	0.03	
7/11/2008	506	MER	9.2	11.7	0.02		0.01	32	0.02	
7/14/2008	505	MER	9.0	9.1	0.02		0.01	32	0.02	
7/14/2008	504	MER	9.1	9.1	0.02		0.01	32	0.02	
7/14/2008	503	MER	9.1	10.1	0.02		0.01	32	0.02	
7/15/2008	521	MER	8.2	8.3	0.16		0.08	32	0.16	
7/15/2008	520	MER	8.3	9.9	0.03		0.02	32	0.03	
7/17/2008	503	MER	9.1	9.2	0.02		0.01	32	0.02	
7/17/2008	502	MER	9.2	10.2	0.03		0.02	32	0.03	
7/17/2008	501	MER	10.2	9.9	0.02		0.01	32	0.02	
7/18/2008	412	MER	7.8	7.9	0.05		0.02	32	0.05	
7/18/2008	410	MER	7.9	7.8	0.05		0.02	32	0.05	
7/18/2008	409	MER	7.8	7.3	0.02		0.01	32	0.02	
7/28/2008	521	MER	9.4	8.8	0.14		0.07	32	0.14	
7/28/2008	520	MER	8.8	10.7	0.05		0.03	32	0.05	
7/28/2008	519	MER	10.7	10.8	0.03		0.02	32	0.03	
7/29/2008	518	MER	9.7	9.5	0.02		0.01	32	0.02	
7/29/2008	517	MER	9.5	9.8	0.03		0.02	32	0.03	
7/29/2008	515	MER	9.8	10.1	0.02		0.01	32	0.02	
7/29/2008	514	MER	10.1	11.5	0.03		0.01	32	0.03	
7/30/2008	409	MER	6.8	10.7	0.05		0.02	32	0.05	
7/30/2008	408	MER	10.7	12.7	0.06		0.03	32	0.06	
7/31/2008	408	MER	8.6	9.6	0.02		0.01	32	0.02	
7/31/2008	407	MER	9.6	11.4	0.04		0.02	32	0.04	
7/31/2008	405	MER	11.4	13.6	0.03		0.02	32	0.03	
7/31/2008	404	MER	13.6	14.5	0.02		0.01	32	0.02	
7/22/2008	56	SJ	7.3	8.0	1.00		0.25	32	1.00	
7/23/2008	61	SJ	6.5	7.1	1.00		0.25	32	1.00	
7/29/2008	8	SJ	7.2	8.2	2.75		1.00	32	2.75	
7/30/2008	8	SJ	7.2	7.0	2.75		1.00	32	2.75	
7/31/2008	8	SJ	7.0	7.2	2.25		1.00	32	2.25	
7/8/2008	219	SAC	5.7	7.0		0.75	0.25	48		1.00
7/8/2008	217	SAC	9.8	8.7		0.25		48		0.33

7/28/2008	215	SAC	6.8	7.3		0.50	0.25	48		0.67
7/29/2008	219	SAC	7.8	7.8		1.75	0.50	48		2.33
7/29/2008	217	SAC	8.2	8.4		0.75	0.25	48		1.00
7/31/2008	212	SAC	7.4	7.4		1.50	0.25	48		2.00
7/31/2008	214	SAC	7.8	7.9		1.00	0.25	48		1.33
7/23/2008	301	SJ	8.3	7.8	1.00		0.25	32	1.00	
7/28/2008	303	SJ	1.9	2.3	1.00		0.25	32	1.00	
7/29/2008	305	SJ	2.3	1.8	1.50		0.25	32	1.50	
7/31/2008	700	ST	8.3	9.1	1.00		0.25	32	1.00	
7/31/2008	701	ST	9.1	9.8	1.00		0.25	32	1.00	
7/31/2008	702	ST	9.8	8.8	1.00		0.25	32	1.00	
					57.73	12.70	30.02		57.73	16.92

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Date	Site ID	County	DO Before	DO After	2, 4-D (Gals.)	Glyphosate (Gals.)	AgriDex (Gals.)	Chem. Rate	2,4-D Acres	Glyphosate Acres
8/5/2008	118	CC	10.6	10.3	0.50		0.25	32	0.50	
8/5/2008	117	CC	10.5	10.3	0.50		0.25	32	0.50	
8/5/2008	115	CC	10.6	10.8	0.50		0.25	32	0.50	
8/25/2008	118	CC	7.6	8.1	2.00		1.00	32	2.00	
8/25/2008	116	CC	8.0	8.1	1.00		0.50	32	1.00	
8/19/2008	109	CC	7.4	7.3		0.50	0.25	48		0.67
8/20/2008	118	CC	7.9	8.1	1.00		0.50	32	1.00	
8/20/2008	117	CC	7.5	8.0	2.00		1.00	32	2.00	
8/20/2008	109	CC	6.6	7.5		1.25	0.50	48		1.67
8/18/2008	911	FR	1.3	1.3		0.05	0.05	50		0.06
8/21/2008	903	FR	1.6	1.6		0.05	0.05	50		0.06
8/4/2008	219	SAC	7.6	7.2		2.00	0.50	48		2.67
8/6/2008	216	SAC	8.5	7.1		2.00	0.75	48		2.67
8/11/2008	129	SAC	7.3	7.5	0.50		0.25	32	0.50	
8/11/2008	122	SAC	7.9	8.1	1.50		0.75	32	1.50	
8/27/2008	216	SAC	8.6	6.9		0.50	0.25	48		0.67
8/27/2008	215	SAC	9.7	6.9		0.25	0.25	48		0.33
8/4/2008	39	SJ	8.2	7.8	1.00		0.50	32	1.00	
8/4/2008	32	SJ	6.5	6.9	1.00		0.50	32	1.00	
8/5/2008	28	SJ	7.2	7.5	2.00		1.00	32	2.00	
8/5/2008	26	SJ	7.8	7.6	1.00		0.50	32	1.00	
8/5/2008	39	SJ	8.4	7.8	1.00		0.50	32	1.00	
8/5/2008	32	SJ	6.2	6.5	1.50		0.75	32	1.50	
8/6/2008	39	SJ	8.5	7.9	1.50		0.75	32	1.50	
8/6/2008	31	SJ	6.8	7.1	2.50		1.50	32	2.50	
8/6/2008	26	SJ	7.2	6.2	2.00		0.50	32	2.00	
8/11/2008	32	SJ	6.5	6.8	1.50		0.75	32	1.50	
8/11/2008	31	SJ	7.5	7.1	1.00		0.50	32	1.00	
8/11/2008	30	SJ	7.0	7.4	0.50		0.25	32	0.50	
8/11/2008	38	SJ	6.2	5.9	2.25		1.00	32	2.25	
8/19/2008	82	SJ	6.1	6.0	0.50		0.25	32	0.50	
8/19/2008	72	SJ	6.3	6.1	0.50		0.25	32	0.50	
8/20/2008	29	SJ	7.9	8.1	0.50		0.25	32	0.50	
8/20/2008	28	SJ	8.1	8.0	1.00		0.50	32	1.00	
8/21/2008	28	SJ	6.7	7.1	1.50		0.75	32	1.50	
8/21/2008	14	SJ	7.3	7.4	0.25		0.25	32	0.25	
8/21/2008	13	SJ	7.3	7.5	0.25		0.25	32	0.25	
8/21/2008	13	SJ	7.0	7.4	1.00		0.25	32	1.00	
8/25/2008	32	SJ	6.7	7.0	1.50		0.75	32	1.50	
8/25/2008	33	SJ	7.2	7.1	1.00		0.50	32	1.00	
8/26/2008	14	SJ	8.8	8.1	2.75		1.00	32	2.75	
8/26/2008	39	SJ	7.4	7.6	1.00		0.50	32	1.00	

8/26/2008	77	SJ	6.1	6.0	0.50		0.25	32	0.50	
8/27/2008	40	SJ	6.8	6.6	0.50		0.25	32	0.50	
8/27/2008	14	SJ	5.1	6.2	2.50		1.25	32	2.50	
8/4/2008	703	ST	9.7	10.5	2.50		0.75	32	2.50	
8/5/2008	700	ST	1.7	9.3	1.00		0.25	32	1.00	
8/5/2008	701	ST	10.8	9.3	0.75		0.25	32	0.75	
8/6/2008	703	ST	9.3	10.8	1.75		0.50	32	1.75	
8/6/2008	704	ST	8.2	9.7	1.25		0.50	32	1.25	
8/14/2008	524	MER	10.9	10.1	0.02		0.04	32	0.02	
8/14/2008	523	MER	10.1	9.9	0.03		0.02	32	0.03	
8/14/2008	522	MER	9.9	11.5	0.03		0.02	32	0.03	
8/22/2008	521	MER	11.0	9.5	0.03		0.02	32	0.03	
8/22/2008	520	MER	9.5	9.6	0.02		0.01	32	0.02	
8/22/2008	519	MER	9.9	9.6	0.02		0.01	32	0.02	
8/22/2008	518	MER	9.6	11.1	0.03		0.02	32	0.03	
8/25/2008	528	MER	9.2	10.9	0.30		0.15	32	0.30	
8/26/2008	517	MER	9.3	9.6	0.05		0.02	32	0.05	
8/26/2008	515	MER	9.6	9.5	0.06		0.03	32	0.06	
8/26/2008	514	MER	9.5	10.8	0.04		0.02	32	0.04	
8/27/2008	513	MER	9.1	10.0	0.04		0.02	32	0.04	
8/27/2008	512	MER	10.0	9.2	0.02		0.01	32	0.02	
8/27/2008	511	MER	9.2	10.0	0.02		0.01	32	0.02	
8/28/2008	510	MER	9.8	9.5	0.02		0.01	32	0.02	
8/28/2008	509	MER	9.5	9.5	0.02		0.01	32	0.02	
8/28/2008	508	MER	9.5	11.6	0.03		0.01	32	0.03	
8/28/2008	507	MER	11.6	11.3	0.02		0.01	32	0.02	
8/28/2008	506	MER	11.3	12.8	0.01		0.01	32	0.01	
8/11/2008	704	ST	7.5	8.6	1.00		0.25	32	1.00	
8/11/2008	705	ST	8.6	9.2	1.50		0.50	32	1.50	
8/20/2008	312	ST	8.9	8.5	1.50		0.50	32	1.50	
8/20/2008	700	ST	9.7	8.9	1.50		0.50	32	1.50	
8/21/2008	702	ST	9.5	8.2	1.00		0.25	32	1.00	
8/21/2008	701	ST	8.2	7.9	2.00		0.50	32	2.00	
8/21/2008	702	ST	7.9	8.3	0.75		0.25	32	0.75	
8/27/2008	706	ST	9.9	10.3	1.00		0.25	32	1.00	
8/27/2008	707	ST	10.3	9.1	2.00		0.75	32	2.00	
8/28/2008	700	ST	8.1	8.3	0.50		0.25	32	0.50	
8/28/2008	701	ST	8.9	9.6	0.50		0.25	32	0.50	
					64.81	6.60	30.55		64.81	8.79

September 2008 Daily Logs

Date	Site ID	County	DO Before	DO After	2, 4-D (Gals.)	Glyphosate (Gals.)	AgriDex (Gals.)	Chem. Rate	2,4-D Acres	Glyphosate Acres
9/8/2008	16	SJ	8.9	8.5	1.50		0.75	32	1.50	
9/15/2008	10	SJ	6.3	5.7	0.50		0.25	32	0.50	
9/15/2008	13	SJ	7.3	7.5	0.50		0.25	32	0.50	
9/15/2008	26	SJ	11.2	11.0	1.00		0.50	32	1.00	
9/18/2008	28	SJ	6.4	8.2	1.50		0.75	32	1.50	
9/22/2008	31	SJ	10.3	8.0	0.25		0.13	32	0.25	
9/22/2008	30	SJ	8.1	8.5	0.25		0.13	32	0.25	
9/23/2008	13	SJ	8.4	8.0	0.75		0.25	32	0.75	
9/24/2008	26	SJ	5.8	6.1	1.00		0.50	32	1.00	
9/24/2008	14	SJ	7.6	9.4	1.75		0.75	32	1.75	
9/25/2008	14	SJ	8.6	8.9	1.00		0.50	32	1.00	
9/30/2008	11	SJ	6.8	7.1	1.00		0.50	32	1.00	
9/30/2008	16	SJ	8.6	8.9	0.50		0.25	32	0.50	
9/23/2008	309	SJ	11.9	11.5	0.50		0.25	32	0.50	
9/3/2008	310	ST	9.9	14.4	0.50		0.25	32	0.50	
9/3/2008	311	ST	8.5	9.6	0.50		0.25	32	0.50	
9/3/2008	311	ST	9.8	10.7	0.75		0.25	32	0.75	
9/23/2008	312	ST	8.3	11.2	0.50		0.25	32	0.50	
9/24/2008	703	ST	8.1	8.5	2.00		1.00	32	2.00	
9/25/2008	703	ST	8.2	9.2	2.25		0.50	32	2.25	
9/8/2008	911	FR	1.4	1.4		0.05	0.05	50		0.06
9/8/2008	902	FR	0.3	0.3		0.05	0.05	50		0.06
9/9/2008	902	FR	1.1	1.1		0.05	0.05	50		0.06
9/4/2008	121	CC	7.7	8.0	1.50		0.75	32	1.50	
9/9/2008	121	CC	7.2	7.6	2.00		1.00	32	2.00	
9/11/2008	118	CC	8.0	8.4	1.00		0.50	32	1.00	
9/11/2008	116	CC	8.1	8.4	2.25		1.25	32	2.25	
9/11/2008	115	CC	8.1	8.3	1.25		0.75	32	1.25	
9/15/2008	116	CC	8.1	8.0	2.00		1.00	32	2.00	
9/15/2008	115	CC	8.4	8.2	2.00		1.00	32	2.00	
9/15/2008	112	CC	8.1	8.4	1.50		0.75	32	1.50	
9/22/2008	115	CC	7.7	7.9	1.50		0.75	32	1.50	
9/29/2008	83	CC	9.6	9.7	0.50		0.25	32	0.50	
9/2/2008	120	SJ	8.5	8.6	1.50		0.75	32	1.50	
9/2/2008	122	SJ	7.9	8.3	1.00		0.50	32	1.00	
9/3/2008	97	CC	8.1	7.8	1.25		0.75	32	1.25	
9/22/2008	95	CC	7.8	7.6	0.50		0.25	32	0.50	
9/22/2008	94	CC	7.7	7.1	0.50		0.25	32	0.50	
9/23/2008	173	CC	7.2	7.4	0.25		0.13	32	0.25	
9/25/2008	107	CC	7.5	7.4	0.50		0.25	32	0.50	
9/30/2008	102	CC	7.8	7.1	0.50		0.25	32	0.50	
9/2/2008	201	SJ	6.8	6.6		0.50	0.25	48		0.67

9/2/2008	202	SJ	7.1	7.3		0.50	0.25	48		0.67
9/8/2008	40	SJ	6.9	7.2	1.00		0.50	32	1.00	
9/8/2008	39	SJ	7.3	7.5	0.50		0.25	32	0.50	
9/10/2008	202	SJ	7.1	7.2		1.50	0.75	48		2.00
9/10/2008	201	SJ	6.8	6.5		0.50	0.25	48		0.67
9/15/2008	99	SJ	7.3	7.0	0.50		0.25	32	0.50	
9/23/2008	17	SJ	7.6	7.8	0.25		0.13	32	0.25	
9/24/2008	38	SJ	6.9	7.1	0.50		0.25	32	0.50	
9/24/2008	32	SJ	7.3	7.5	1.00		0.50	32	1.00	
9/25/2008	17	SJ	7.5	7.2	0.50		0.25	32	0.50	
9/29/2008	40	SJ	5.2	7.6	0.50		0.25	32	0.50	
9/29/2008	39	SJ	7.6	7.8	0.50		0.25	32	0.50	
9/30/2008	17	SJ	8.1	7.9	0.50		0.25	32	0.50	
9/30/2008	100	SJ	8.4	8.2	1.00		0.50	32	1.00	
9/18/2000	83	CC	8.4	8.2	1.00		0.50	32	1.00	
9/2/2008	29	SJ	6.4	6.7	0.50		0.25	32	0.50	
9/4/2008	15	SJ	6.8	7.3	2.50		1.25	32	2.50	
9/9/2008	28	SJ	6.2	6.1	2.00		1.00	32	2.00	
9/9/2008	11	SJ	6.8	6.7	1.00		0.50	32	1.00	
9/10/2008	15	SJ	8.3	7.8	2.50		1.25	32	2.50	
9/10/2008	14	SJ	7.7	7.1	2.00		1.00	32	2.00	
9/30/2008	15	SJ	7.7	8.4	2.50		1.25	32	2.50	
9/2/2008	505	MER	9.3	10.7	0.01		0.01	32	0.01	
9/2/2008	504	MER	10.7	11.0	0.02		0.01	32	0.02	
9/2/2008	503	MER	11.0	14.1	0.02		0.01	32	0.02	
9/3/2008	528	MER	10.3	12.9	0.33		0.16	32	0.33	
9/4/2008	502	MER	8.2	8.1	0.05		0.02	32	0.05	
9/4/2008	501	MER	8.1	9.1	0.02		0.01	32	0.02	
9/4/2008	500	MER	9.1	8.2	0.02		0.01	32	0.02	
9/4/2008	400	MER	8.2	8.3	0.02		0.01	32	0.02	
9/9/2008	402	MER	7.1	10.6	0.03		0.02	32	0.03	
9/9/2008	401	MER	10.6	16.0	0.02		0.01	32	0.02	
9/9/2008	400	MER	16.0	8.7	0.24		0.12	32	0.24	
9/11/2008	412	MER	5.3	7.7	0.08		0.04	32	0.08	
9/11/2008	410	MER	7.7	8.1	0.09		0.05	32	0.09	
9/11/2008	409	MER	8.1	9.3	0.14		0.05	32	0.14	
9/12/2008	409	MER	5.7	8.3	0.06		0.03	32	0.06	
9/12/2008	408	MER	8.3	12.2	0.05		0.02	32	0.05	
9/15/2008	408	MER	8.1	8.5	0.02		0.01	32	0.02	
9/15/2008	407	MER	8.5	10.2	0.04		0.02	32	0.04	
9/15/2008	405	MER	10.2	11.6	0.06		0.03	32	0.06	
9/15/2008	404	MER	11.6	12.8	0.05		0.02	32	0.05	
9/16/2008	400	MER	6.4	5.8	0.19		0.09	32	0.19	
9/16/2008	401	MER	5.8	6.0	0.13		0.06	32	0.13	
9/18/2008	528	MER	7.9	9.4	0.22		0.11	32	0.22	
9/18/2008	526	MER	9.4	9.8	0.09		0.05	32	0.09	
9/19/2008	520	MER	6.3	6.5	0.02		0.01	32	0.02	
9/19/2008	521	MER	6.5	7.5	0.30		0.15	32	0.30	
9/19/2008	520	MER	7.5	8.1	0.11		0.05	32	0.11	

9/22/2008	524	MER	8.7	8.5	0.02		0.01	32	0.02	
9/22/2008	523	MER	8.5	9.2	0.04		0.02	32	0.04	
9/22/2008	522	MER	9.2	8.2	0.03		0.02	32	0.03	
9/22/2008	521	MER	8.2	9.5	0.02		0.01	32	0.02	
9/22/2008	520	MER	9.5	9.6	0.03		0.02	32	0.03	
9/23/2008	519	MER	8.2	8.1	0.02		0.01	32	0.02	
9/23/2008	518	MER	8.1	8.8	0.03		0.02	32	0.03	
9/23/2008	517	MER	8.8	9.1	0.02		0.01	32	0.02	
9/23/2008	515	MER	9.1	8.5	0.01		0.01	32	0.01	
9/23/2008	514	MER	8.5	9.4	0.01		0.01	32	0.01	
9/24/2008	513	MER	8.2	8.5	0.02		0.01	32	0.02	
9/24/2008	512	MER	8.5	8.3	0.03		0.02	32	0.03	
9/24/2008	511	MER	8.3	8.2	0.01		0.01	32	0.01	
9/25/2008	510	MER	8.2	8.0	0.01		0.01	32	0.01	
9/25/2008	508	MER	8.2	8.1	0.02		0.01	32	0.02	
9/25/2008	507	MER	8.1	8.2	0.01		0.01	32	0.01	
9/25/2008	506	MER	8.2	8.7	0.01		0.01	32	0.01	
9/29/2008	505	MER	8.2	8.1	0.01		0.01	32	0.01	
9/29/2008	504	MER	8.1	8.0	0.02		0.01	32	0.02	
9/29/2008	503	MER	8.0	9.3	0.01		0.01	32	0.01	
9/30/2008	412	MER	7.0	7.0	0.05		0.02	32	0.05	
9/30/2008	410	MER	7.0	9.4	0.03		0.02	32	0.03	
9/30/2008	409	MER	9.4	9.6	0.02		0.01	32	0.02	
9/2/2008	67	SJ	7.2	6.9	2.25		0.50	32	2.25	
9/4/2008	61	SJ	8.2	8.1	2.75		0.50	32	2.75	
9/4/2008	62	SJ	7.8	7.2	2.00		0.25	32	2.00	
9/8/2008	65	SJ	8.4	7.9	2.75		0.75	32	2.75	
9/8/2008	15	SJ	11.6	10.4	2.75		0.75	32	2.75	
9/10/2008	66	SJ	9.9	9.3	1.75		0.50	32	1.75	
9/11/2008	56	SJ	9.1	10.3	2.75		1.00	32	2.75	
9/11/2008	52	SJ	10.1	9.9	1.25		0.25	32	1.25	
9/15/2008	56	SJ	7.2	7.7	2.25		0.50	32	2.25	
9/15/2008	15	SJ	8.1	7.6	2.75		0.50	32	2.75	
9/18/2008	66	SJ	11.1	10.9	1.25		0.25	32	1.25	
9/23/2008	69	SJ	8.5	8.1	2.75		1.00	32	2.75	
9/23/2008	16	SJ	9.3	6.2	2.75		1.00	32	2.75	
9/24/2008	16	SJ	8.5	8.6	2.75		1.00	32	2.75	
9/25/2008	15	SJ	8.2	7.6	2.75		1.00	32	2.75	
9/29/2008	67	SJ	9.4	9.9	2.75		0.75	32	2.75	
9/4/2008	19	CC	7.7	7.7	2.25		1.25	32	2.25	
9/24/2008	19	CC	8.6	8.7	0.25		0.25	32	0.25	
9/3/2008	217	SAC	9.8	9.5		0.75	0.25	48		1.00
9/3/2008	219	SAC	5.1	6.9		2.00	0.50	48		2.67
9/9/2008	215	SAC	6.5	5.8		2.00	0.75	48		2.67
9/15/2008	215	SAC	2.9	5.4		2.00	0.75	48		2.67
9/18/2008	215	SAC	6.3	6.9		2.00	0.75	48		2.67
9/18/2008	214	SAC	11.0	12.3		1.50	0.50	48		2.00
9/24/2008	209	SAC	7.9	9.8	2.75		1.50	32	2.75	
9/25/2008	210	SAC	11.8	11.8	1.25		0.50	32	1.25	

9/30/2008	209	SAC	6.3	8.6	1.50		0.25	32	1.50	
9/30/2008	210	SAC	8.0	7.9	1.50		0.50	32	1.50	
9/4/2008	43	SJ	8.9	7.8	0.25		0.25	32	0.25	
9/4/2008	44	SJ	7.2	7.6	0.25		0.25	32	0.25	
9/8/2008	18	SJ	7.3	10.7	2.00		0.75	32	2.00	
9/10/2008	18	SJ	6.7	7.7	2.00		0.75	32	2.00	
9/10/2008	19	SJ	8.9	9.7	0.50		0.50	32	0.50	
9/10/2008	19	SJ	8.9	9.7		1.00		48		1.33
9/11/2008	44	SJ	7.0	7.3	1.00		0.25	32	1.00	
9/11/2008	43	SJ	10.3	7.5	1.00		0.25	32	1.00	
9/11/2008	13	SJ	13.7	8.2	1.75		0.50	32	1.75	
9/23/2008	44	SJ	8.8	9.0	2.75		0.75	32	2.75	
9/25/2008	209	SJ	7.7	8.8	2.50		0.75	32	2.50	
9/25/2008	210	SJ	8.8	12.0	1.50		0.75	32	1.50	
9/29/2008	209	SJ	7.6	8.4	1.50		0.50	32	1.50	
9/29/2008	203	SJ	8.7	8.8		0.25	0.25	48		0.33
9/30/2008	210	SJ	8.0	8.3	0.50		0.25	32	0.50	
9/2/2008	301	SJ	9.3	8.5	0.75		0.25	32	0.75	
9/4/2008	708	ST	10.3	9.5	2.75		1.25	32	2.75	
9/8/2008	709	ST	9.8	10.7	1.25		0.50	32	1.25	
9/8/2008	710	ST	10.7	8.3	1.50		0.50	32	1.50	
9/9/2008	712	ST	11.6	8.9	2.50		0.75	32	2.50	
9/9/2008	711	ST	8.9	9.3	2.50		0.75	32	2.50	
9/10/2008	713	ST	9.7	9.6	1.50		0.75	32	1.50	
9/11/2008	714	ST	9.3	10.9	1.00		0.25	32	1.00	
9/11/2008	715	ST	10.9	9.7	0.50		0.25	32	0.50	
9/29/2008	313	ST	9.3	8.7	1.00		0.25	32	1.00	
9/29/2008	700	ST	10.1	8.1	1.00		0.25	32	1.00	
9/29/2008	312	ST	9.3	10.9	1.00		0.50	32	1.00	
9/30/2008	704	ST	9.3	10.9	1.50		0.50	32	1.50	
9/30/2008	705	ST	10.9	9.2	1.50		0.75	32	1.50	
					149.16	14.65	65.38		149.16	19.53

October 2008 Daily Logs

Date	Site ID	County	DO Before	DO After	2, 4-D (Gals.)	Glyphosate (Gals.)	AgriDex (Gals.)	Chem. Rate	2,4-D Acres	Glyphosate Acres
10/1/2008	102	CC	7.6	7.2	0.50		0.25	32	0.50	
10/1/2008	104	SJ	8.3	8.1	0.50		0.25	32	0.50	
10/1/2008	82	SJ	7.8	8.3	2.00		1.00	32	2.00	
10/1/2008	202	SJ	7.6	10.1	2.75		1.00	32	2.75	
10/1/2008	201	SJ	10.8	13.2	1.00		0.50	32	1.00	
10/1/2008	704	ST	8.3	9.2	1.50		0.75	32	1.50	
10/1/2008	702	ST	8.1	8.4	1.50		0.75	32	1.50	
10/2/2008	32	SJ	6.9	7.6	0.50		0.25	32	0.50	
10/2/2008	31	SJ	7.7	9.2	0.50		0.25	32	0.50	
10/2/2008	267	SOL	8.0	7.9	0.50		0.25	32	0.50	
10/2/2008	214	SAC	10.9	12.7		2.00	0.75	48		2.67
10/3/2008	528	MER	8.2	8.4	0.14		0.07	32	0.14	
10/6/2008	28	SJ	7.0	7.3	1.00		0.50	32	1.00	
10/6/2008	109	CC	8.2	8.7	1.50		0.75	32	1.50	
10/6/2008	106	CC	7.2	8.0	1.50		0.75	32	1.50	
10/6/2008	62	SJ	7.2	8.4	2.25		0.50	32	2.25	
10/6/2008	202	SJ	7.1	12.9	2.75		1.00	32	2.75	
10/6/2008	201	SJ	8.8	10.2	1.25		1.00	32	1.25	
10/6/2008	706	ST	9.8	8.2	1.50		0.75	32	1.50	
10/6/2008	707	ST	8.9	8.4	1.00		0.25	32	1.00	
10/7/2008	109	CC	8.3	8.5	0.50		0.25	32	0.50	
10/7/2008	14	SJ	7.2	7.5	1.50		0.75	32	1.50	
10/7/2008	32	SJ	7.4	7.8	1.00		0.50	32	1.00	
10/7/2008	67	SJ	9.2	9.0	2.50		0.75	32	2.50	
10/7/2008	100	SJ	9.9	12.9	2.00		0.50	32	2.00	
10/7/2008	217	SAC	5.1	6.6		1.00	0.50	48		1.33
10/7/2008	216	SAC	6.9	11.3		1.00	0.50	48		1.33
10/7/2008	214	SAC	8.7	8.9		0.75	0.25	48		1.00
10/7/2008	700	ST	8.6	9.3	1.50		0.75	32	1.50	
10/7/2008	701	ST	9.3	8.4	1.00		0.50	32	1.00	
10/8/2008	112	CC	8.3	8.1	0.50		0.25	32	0.50	
10/8/2008	116	CC	8.0	8.5	1.50		0.75	32	1.50	
10/8/2008	205	SJ	6.8	7.1		1.25	0.75	48		1.67
10/8/2008	203	SJ	7.4	7.9		1.25	0.75	48		1.67
10/8/2008	19	SAC	7.2	6.8	2.00		0.75	32	2.00	
10/8/2008	20	SAC	7.6	7.4	0.75		0.25	32	0.75	
10/8/2008	18	SAC	8.5	9.1	0.75		0.25	32	0.75	
10/8/2008	709	ST	8.7	9.3	2.25		1.00	32	2.25	
10/14/2008	216	SAC	8.3	8.7		2.00	0.75	48		2.67
10/14/2008	219	SAC	7.2	7.5		2.00	0.75	48		2.67
10/14/2008	119	CC	8.9	9.1	1.25		0.75	32	1.25	
10/14/2008	97	CC	8.1	7.6	1.50		0.75	32	1.50	

10/14/2008	38	SJ	8.2	8.4	1.00		0.50	32	1.00	
10/14/2008	62	SJ	8.0	9.1	2.25		0.50	32	2.25	
10/14/2008	100	SJ	8.9	7.1	1.75		0.25	32	1.75	
10/14/2008	712	ST	9.8	8.3	0.50		0.25	32	0.50	
10/14/2008	711	ST	8.3	10.6	0.75		0.25	32	0.75	
10/14/2008	710	ST	10.6	9.4	1.25		0.50	32	1.25	
10/15/2008	15	SJ	8.6	8.9	1.00		0.50	32	1.00	
10/15/2008	12	SJ	7.8	9.1		2.25	0.50	48		3.00
10/15/2008	61	SJ	8.2	8.0		0.25	0.50	48		0.33
10/15/2008	61	SJ	8.2	8.0	2.50		0.50	32	2.50	
10/15/2008	715	ST	10.9	9.3	1.00		0.50	32	1.00	
10/15/2008	716	ST	9.3	10.3	0.50		0.25	32	0.50	
					57.14	13.75	29.57		57.14	18.33

APPENDIX A

Site Maps and Monitoring and Laboratory Data

Site 217

HERBICIDE RESIDUE RESULTS

Glyphosate Residue

Sample Location	Lab Sample ID	DBW ID	Date Sample Taken	Date Sample Received	Date Sample Extracted	Date Sample Analyzed	Glyphosate (ppb)
1A							
1C							
2B							
3A							
3B							
3C							

Agridex Residue

Sample Location	Lab Sample ID	DBW ID	Date Sample Taken	Date Sample Received	Date Sample Extracted	Date Sample Analyzed	Agridex (ppb)
1A							
1C							
2B							
3A							
3B							
3C							

WATER QUALITY DATA

Sample Location	Sample ID	Date	UTM Easting	UTM Northing	Time	Water Temp (°C)	Conductivity (mS/cm)	Salinity (ppt)	DO (mg/L)	pH	Turbidity (NTU)	Tide Cycle
1A												
1C												
2B												
3A												
3B												
3C												

HERBICIDE RESIDUE RESULTS

Glyphosate Residue

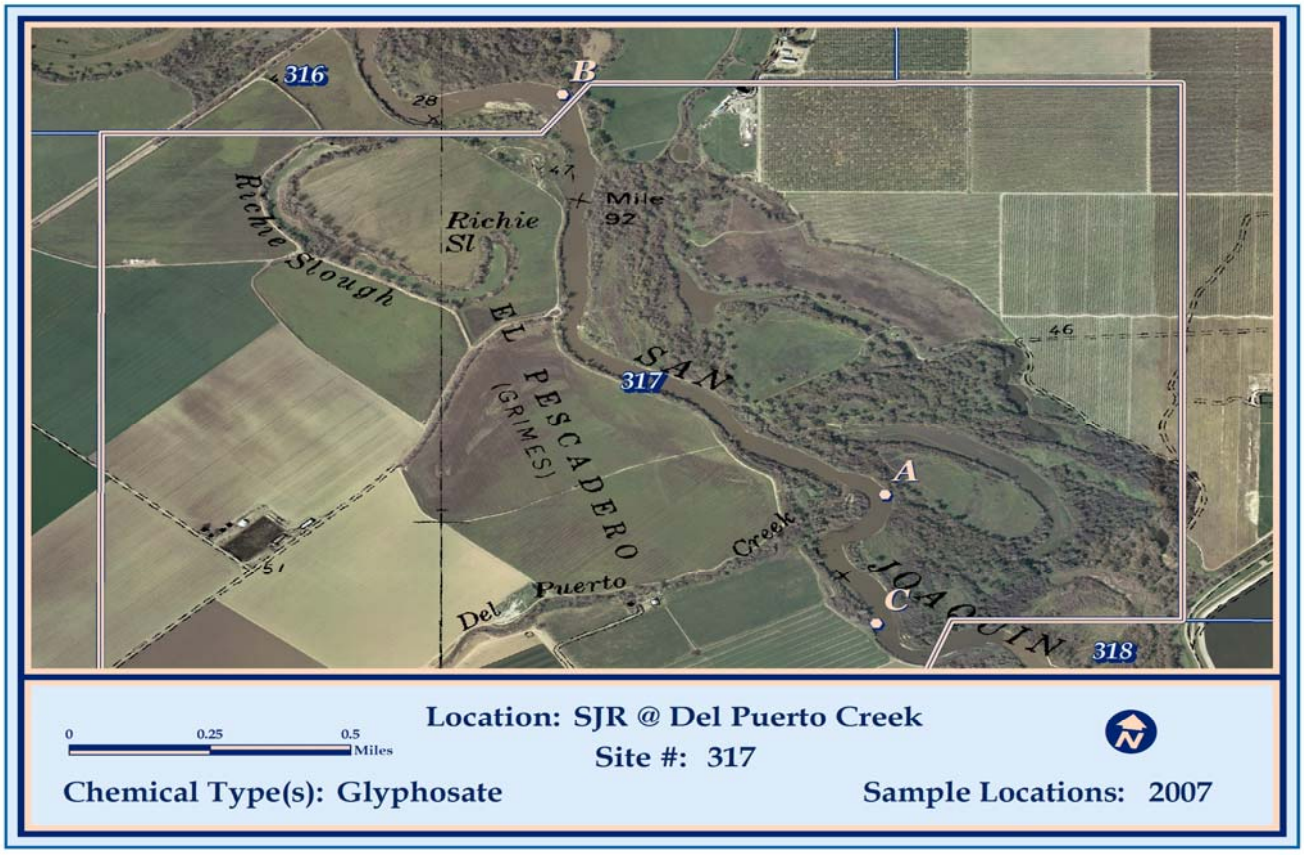
Sample Location	Lab Sample ID	DBW ID	Date Sample Taken	Date Sample Received	Date Sample Extracted	Date Sample Analyzed	Glyphosate (ppb)
1A	2007-0213	H317-073107-3A	7/31/2007	7/31/2007	8/1/2007	8/7/2007	ND
1C	2007-0212	H317-073107-2A	7/31/2007	7/31/2007	8/1/2007	8/7/2007	ND
2B	2007-0215	H317-073107-5A	7/31/2007	7/31/2007	8/1/2007	8/7/2007	ND
3A	2007-0229	H317-080207-3A	8/2/2007	8/2/2007	8/6/2007	8/9/2007	ND
3B	2007-0231	H317-080207-5A	8/2/2007	8/2/2007	8/6/2007	8/9/2007	ND
3C	2007-0228	H317-080207-2A	8/2/2007	8/2/2007	8/6/2007	8/9/2007	ND

Agridex Residue

Sample Location	Lab Sample ID	DBW ID	Date Sample Taken	Date Sample Received	Date Sample Extracted	Date Sample Analyzed	Agridex (ppb)
1A	2007-0213	H317-073107-3A	7/31/2007	7/31/2007	8/13/2007	8/13/2007	ND
1C	2007-0212	H317-073107-2A	7/31/2007	7/31/2007	8/13/2007	8/13/2007	ND
2B	2007-0215	H317-073107-5A	7/31/2007	7/31/2007	8/13/2007	8/13/2007	ND
3A	2007-0229	H317-080207-3A	8/2/2007	8/2/2007	8/13/2007	8/13/2007	ND
3B	2007-0231	H317-080207-5A	8/2/2007	8/2/2007	8/13/2007	8/13/2007	ND
3C	2007-0228	H317-080207-2A	8/2/2007	8/2/2007	8/13/2007	8/13/2007	ND

WATER QUALITY DATA

Sample Location	Sample ID	Date	UTM Easting	UTM Northing	Time	Water Temp (°C)	Conductivity (mS/cm)	Salinity (ppt)	DO (mg/L)	pH	Turbidity (NTU)	Tide Cycle
1A	H317-073107-3	07/31/07	666563	4156716	09:20:00	24.99	1.24	0.66	9.00	8.49	58.3	N/A
1C	H317-073107-2	07/31/07	666551	4156286	09:05:00	24.99	1.24	0.66	8.56	8.49	52.9	N/A
2B	H317-073107-5	07/31/07	668949	4152947	11:00:00	25.52	1.24	0.66	10.35	8.5	48.5	N/A
3A	H317-080207-3	08/02/07	666571	4156714	09:45:16	25.3	1.165	0.61	9.26	8.07	50.1	N/A
3B	H317-080207-5	08/02/07	665808	4158032	10:00:07	24.82	1.141	0.60	9.06	8.08	51.2	N/A
3C	H317-080207-2	08/02/07	666553	4156289	09:36:10	25.03	1.161	0.61	9.02	7.99	49.9	N/A



SITE 319
HERBICIDE RESIDUE RESULTS

Glyphosate Residue

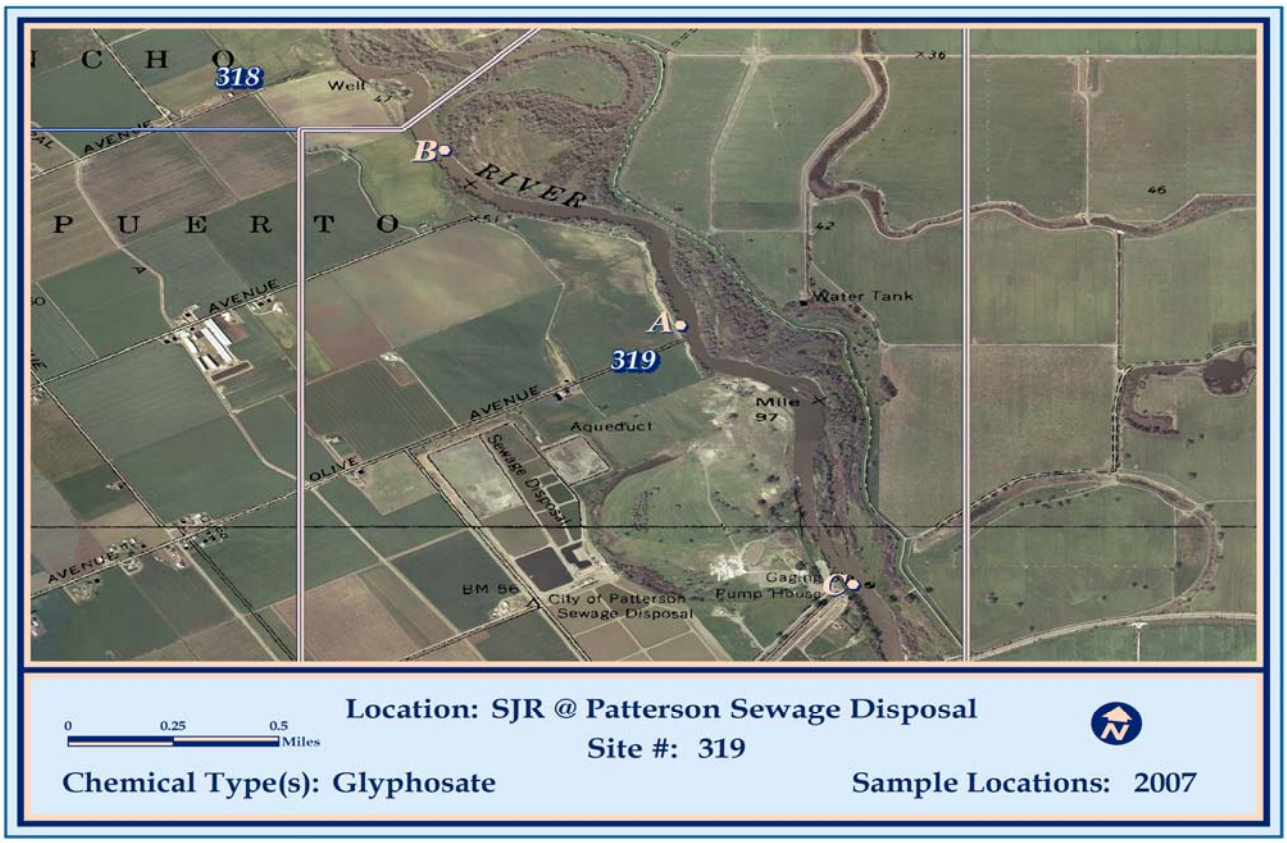
Sample Location	Lab Sample ID	DBW ID	Date Sample Taken	Date Sample Received	Date Sample Extracted	Date Sample Analyzed	Glyphosate (ppb)
1A	2007-0220	H319-073107-3A	7/31/2007	7/31/2007	8/1/2007	8/9/2007	ND
1C	2007-0219	H319-073107-2A	7/31/2007	7/31/2007	8/1/2007	8/7/2007	ND
2B	2007-0222	H319-073107-5A	7/31/2007	7/31/2007	8/1/2007	8/9/2007	ND
3A	2007-0234	H319-080207-3A	8/2/2007	8/2/2007	8/6/2007	8/9/2007	ND
3B	2007-0236	H319-080207-5A	8/2/2007	8/2/2007	8/6/2007	8/9/2007	ND
3C	2007-0233	H319-080207-2A	8/2/2007	8/2/2007	8/6/2007	8/9/2007	ND

Agridex Residue

Sample Location	Lab Sample ID	DBW ID	Date Sample Taken	Date Sample Received	Date Sample Extracted	Date Sample Analyzed	Agridex (ppb)
1A	2007-0220	H319-073107-3A	7/31/2007	7/31/2007	8/13/2007	8/13/2007	ND
1C	2007-0219	H319-073107-2A	7/31/2007	7/31/2007	8/13/2007	8/13/2007	ND
2B	2007-0222	H319-073107-5A	7/31/2007	7/31/2007	8/13/2007	8/13/2007	ND
3A	2007-0234	H319-080207-3A	8/2/2007	8/2/2007	8/13/2007	8/13/2007	ND
3B	2007-0236	H319-080207-5A	8/2/2007	8/2/2007	8/13/2007	8/13/2007	ND
3C	2007-0233	H319-080207-2A	8/2/2007	8/2/2007	8/13/2007	8/13/2007	ND

WATER QUALITY DATA

Sample Location	Sample ID	Date	UTM Easting	UTM Northing	Time	Water Temp (°C)	Conductivity (mS/cm)	Salinity (ppt)	DO (mg/L)	pH	Turbidity (NTU)	Tide Cycle
1A	H319-073107-3	07/31/07	669497	4151804	10:00:00	24.96	1.14	0.60	8.73	8.3	52.3	N/A
1C	H319-073107-2	07/31/07	665803	4158032	09:50:00	25.04	1.12	0.59	8.86	8.4	53.9	N/A
2B	H319-073107-5	07/31/07	668215	4153712	11:45:00	25.75	1.17	0.62	8.39	8.4	47.0	N/A
3A	H319-080207-3	08/02/07	668952	4152954	10:35:21	24.97	1.11	0.58	9.09	7.99	54.9	N/A
3B	H319-080207-5	08/02/07	668225	4153719	10:46:04	25.22	1.12	0.59	9.03	7.98	64.2	N/A
3C	H319-080207-2	08/02/07	669500	4151809	10:26:46	25.32	1.12	0.59	9.20	8.04	60.4	N/A



SITE 709
HERBICIDE RESIDUE RESULTS

2,4-D Residue

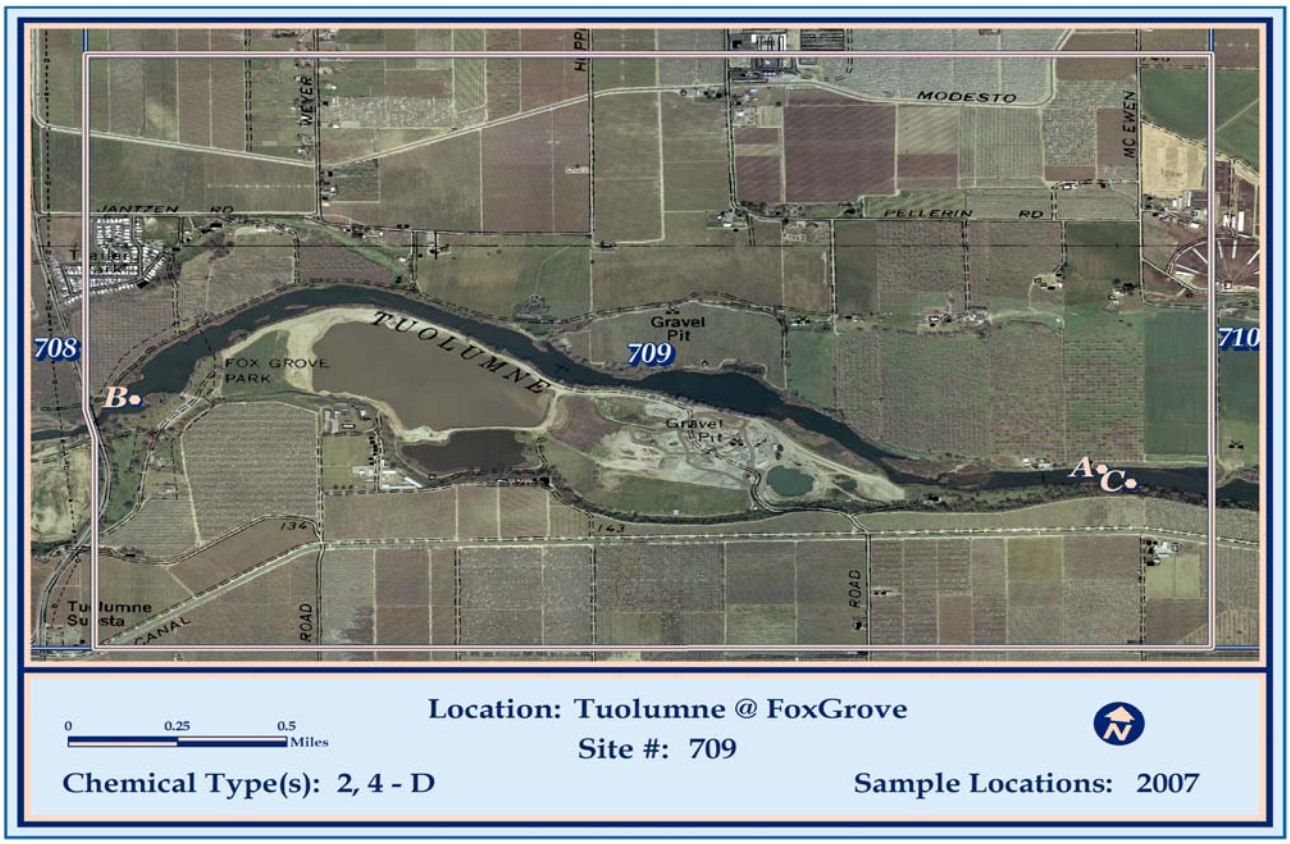
Sample Location	Lab Sample ID	DBW ID	Date Sample Taken	Date Sample Received	Date Sample Extracted	Date Sample Analyzed	2,4-D (ppb)
1A	2007-0280	H709-080707-3A	8/7/2007	8/7/2007	8/16/2007	8/20/2007	ND
1C	2007-0279	H709-080707-2A	8/7/2007	8/7/2007	8/16/2007	8/20/2007	ND
2B	2007-0282	H709-080707-5A	8/7/2007	8/7/2007	8/16/2007	8/20/2007	ND
3A	2007-0290	H709-080907-3A	8/9/2007	8/9/2007	8/15/2007	8/22/2007	4.1
3B	2007-0292	H709-080907-5A	8/9/2007	8/9/2007	8/15/2007	8/22/2007	1
3C	2007-0289	H709-080907-2A	8/9/2007	8/9/2007	8/15/2007	8/22/2007	4.5

Agridex Residue

Sample Location	Lab Sample ID	DBW ID	Date Sample Taken	Date Sample Received	Date Sample Extracted	Date Sample Analyzed	Agridex (ppb)
1A	2007-0280	H709-080707-3A	8/7/2007	8/7/2007	9/13/2007	9/27/2007	ND
1C	2007-0279	H709-080707-2A	8/7/2007	8/7/2007	9/13/2007	9/27/2007	ND
2B	2007-0282	H709-080707-5A	8/7/2007	8/7/2007	9/13/2007	9/27/2007	ND
3A	2007-0290	H709-080907-3A	8/9/2007	8/9/2007	9/13/2007	9/27/2007	ND
3B	2007-0292	H709-080907-5A	8/9/2007	8/9/2007	9/13/2007	9/27/2007	ND
3C	2007-0289	H709-080907-2A	8/9/2007	8/9/2007	9/13/2007	9/27/2007	ND

WATER QUALITY DATA

Sample Location	Sample ID	Date	UTM Easting	UTM Northing	Time	Water Temp (°C)	Conductivity (mS/cm)	Salinity (ppt)	DO (mg/L)	pH	Turbidity (NTU)	Tide Cycle
1A	H709-080707-3	08/07/07	693082	4165498	09:25:13	23.86	0.103	0.04	7.92	7.62	3.8	N/A
1C	H709-080707-2	08/07/07	693172	4165430	09:05:33	23.54	0.0988	0.04	7.76	7.79	2.5	N/A
2B	H709-080707-5	08/07/07	690246	4165725	11:00:16	25.02	0.1174	0.05	7.02	7.42	1.0	N/A
3A	H709-080907-3	08/09/07	693084	4165498	10:35:01	25.70	0.100	0.04	10.96	8.56	5.0	N/A
3B	H709-080907-5	08/09/07	690204	4165669	10:48:54	24.16	.1140	0.04	7.61	7.68	1.8	N/A
3C	H709-080907-2	08/09/07	693108	4165438	10:10:30	23.94	0.096	0.04	9.12	7.78	9.7	N/A



SITE 710
HERBICIDE RESIDUE RESULTS

2,4-D Residue

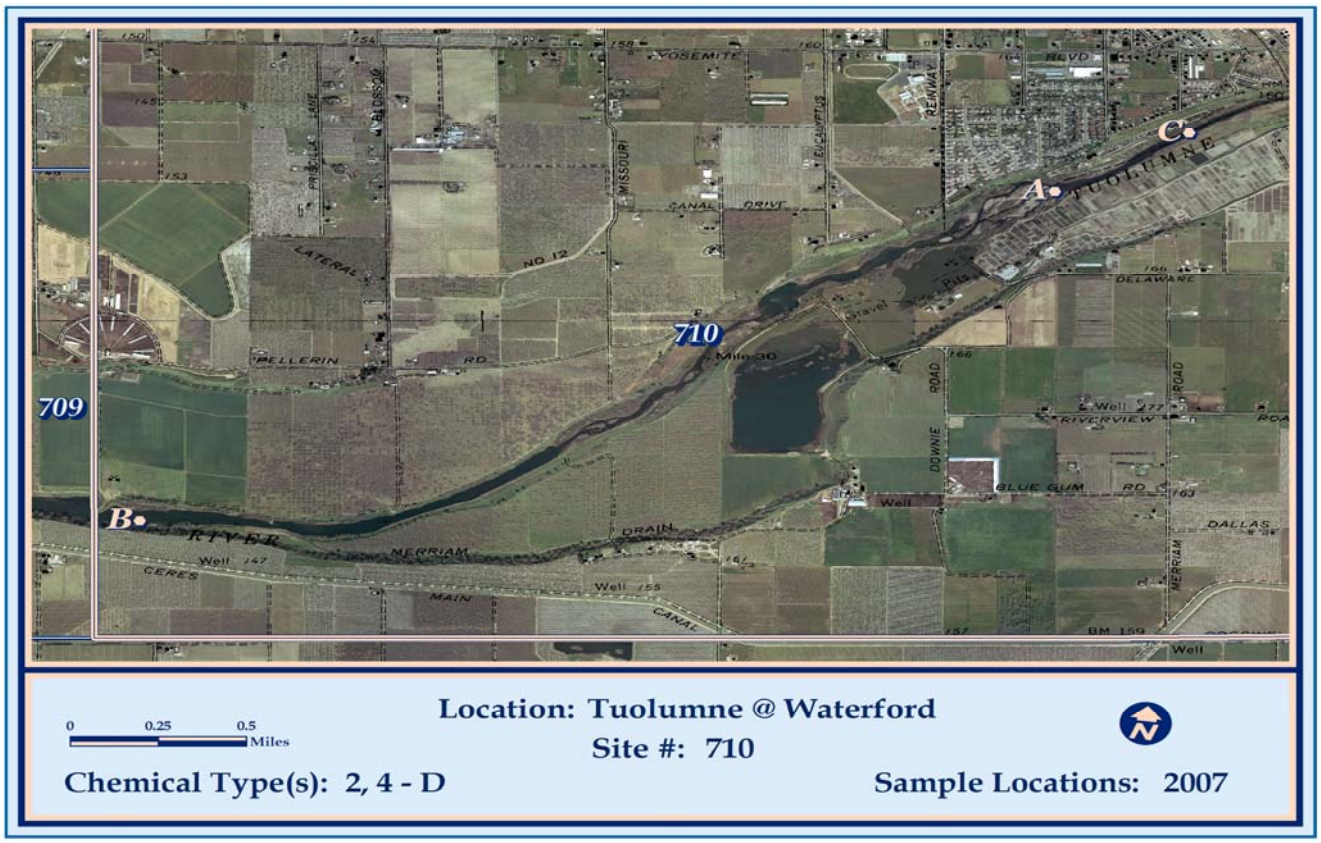
Sample Location	Lab Sample ID	DBW ID	Date Sample Taken	Date Sample Received	Date Sample Extracted	Date Sample Analyzed	2,4-D (ppb)
1A	2007-0285	H710-080707-3A	8/7/2007	8/7/2007	8/16/2007	8/20/2007	ND
1C	2007-0284	H710-080707-2A	8/7/2007	8/7/2007	8/16/2007	8/20/2007	ND
2B	2007-0287	H710-080707-5A	8/7/2007	8/7/2007	8/16/2007	8/20/2007	0.1
3A	2007-0295	H710-080907-3A	8/9/2007	8/9/2007	8/15/2007	8/22/2007	2.1
3B	2007-0297	H710-080907-5A	8/9/2007	8/9/2007	8/15/2007	8/22/2007	2.5
3C	2007-0294	H710-080907-2A	8/9/2007	8/9/2007	8/15/2007	8/22/2007	1.8

Agridex Residue

Sample Location	Lab Sample ID	DBW ID	Date Sample Taken	Date Sample Received	Date Sample Extracted	Date Sample Analyzed	Agridex (ppb)
1A	2007-0285	H710-080707-3A	8/7/2007	8/7/2007	9/13/2007	9/27/2007	ND
1C	2007-0284	H710-080707-2A	8/7/2007	8/7/2007	9/13/2007	9/27/2007	ND
2B	2007-0287	H710-080707-5A	8/7/2007	8/7/2007	9/13/2007	9/27/2007	ND
3A	2007-0295	H710-080907-3A	8/9/2007	8/9/2007	9/13/2007	9/27/2007	ND
3B	2007-0297	H710-080907-5A	8/9/2007	8/9/2007	9/13/2007	9/27/2007	ND
3C	2007-0294	H710-080907-2A	8/9/2007	8/9/2007	9/13/2007	9/27/2007	ND

WATER QUALITY DATA

Sample Location	Sample ID	Date	UTM Easting	UTM Northing	Time	Water Temp (°C)	Conductivity (mS/cm)	Salinity (ppt)	DO (mg/L)	pH	Turbidity (NTU)	Tide Cycle
1A	H710-080707-3	08/07/07	696845	4167248	10:25:35	22.25	0.078	0.03	8.32	7.90	1.0	N/A
1C	H710-080707-2	08/07/07	697325	4167582	10:15:11	22.31	0.083	0.03	8.06	7.44	1.4	N/A
2B	H710-080707-5	08/07/07	693570	4165377	11:50:26	24.22	0.099	0.04	8.09	7.9	12.3	N/A
3A	H710-080907-3	08/09/07	696848	4167233	09:30:10	22.27	0.082	0.03	7.75	7.89	1.2	N/A
3B	H710-080907-5	08/09/07	693746	4165388	10:45:20	23.36	0.94	0.03	7.41	7.53	2.3	N/A
3C	H710-080907-2	08/09/07	697326	4167580	09:15:15	22.40	0.077	0.03	7.88	8.09	0.3	N/A



SITE 014
HERBICIDE RESIDUE RESULTS

2,4-D Residue

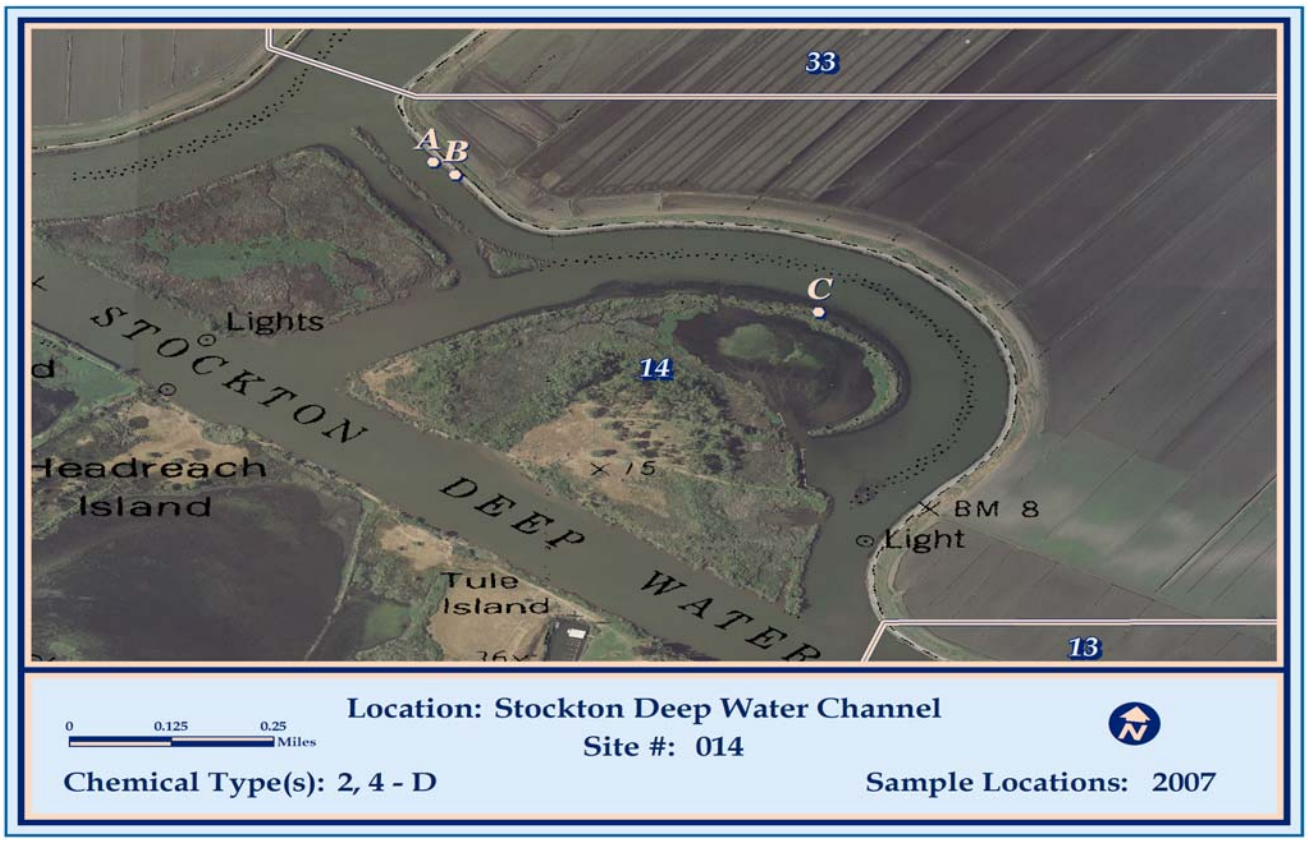
Sample Location	Lab Sample ID	DBW ID	Date Sample Taken	Date Sample Received	Date Sample Extracted	Date Sample Analyzed	2,4-D (ppb)
1A	2007-0307	H014-081407-3A	8/14/2007	8/14/2007	8/17/2007	8/23/2007	0.2
1C	2007-0306	H014-081407-2A	8/14/2007	8/14/2007	8/17/2007	8/23/2007	0.2
2B	2007-0309	H014-081407-5A	8/14/2007	8/14/2007	8/17/2007	8/23/2007	2.1
3A	2007-0317	H014-081607-3A	8/16/2007	8/16/2007	8/20/2007	8/24/2007	0.1
3B	2007-0319	H014-081607-5A	8/16/2007	8/16/2007	8/20/2007	8/24/2007	ND
3C	2007-0316	H014-081607-2A	8/16/2007	8/16/2007	8/20/2007	8/24/2007	0.2

Agridex Residue

Sample Location	Lab Sample ID	DBW ID	Date Sample Taken	Date Sample Received	Date Sample Extracted	Date Sample Analyzed	Agridex (ppb)
1A	2007-0307	H014-081407-3A	8/14/2007	8/14/2007	9/21/2007	10/1/2007	ND
1C	2007-0306	H014-081407-2A	8/14/2007	8/14/2007	9/21/2007	10/1/2007	ND
2B	2007-0309	H014-081407-5A	8/14/2007	8/14/2007	9/21/2007	10/1/2007	ND
3A	2007-0317	H014-081607-3A	8/16/2007	8/16/2007	9/21/2007	10/1/2007	ND
3B	2007-0319	H014-081607-5A	8/16/2007	8/16/2007	9/21/2007	10/1/2007	ND
3C	2007-0316	H014-081607-2A	8/16/2007	8/16/2007	9/21/2007	10/1/2007	ND

WATER QUALITY DATA

Sample Location	Sample ID	Date	UTM Easting	UTM Northing	Time	Water Temp (ºC)	Conductivity (mS/cm)	Salinity (ppt)	DO (mg/L)	pH	Turbidity (NTU)	Tide Cycle
1A	H014-081407-3	08/14/07	633926	4210831	08:30:00	0.0	0	0	5.30	0	0	high slack
1C	H014-081407-2	08/14/07	634064	4210799	08:20:00	0.0	0	0	5.40	0	0	high slack
2B	H014-081407-5	08/14/07	633473	421119.	09:40:00	0.0	0	0	5.70	0	0	high slack
3A	H014-081607-3	08/16/07	633926	4210836	08:44:51	22.48	0.218	0.10	6.21	7.58	3.4	high slack
3B	H014-081607-5	08/16/07	633473	4211128	09:05:13	22.46	0.216	0.10	7.57	7.77	4.1	high slack
3C	H014-081607-2	08/16/07	634061	4210804	08:37:46	22.65	0.219	0.10	7.15	7.73	2.7	high slack



SITE 044
HERBICIDE RESIDUE RESULTS

2,4-D Residue

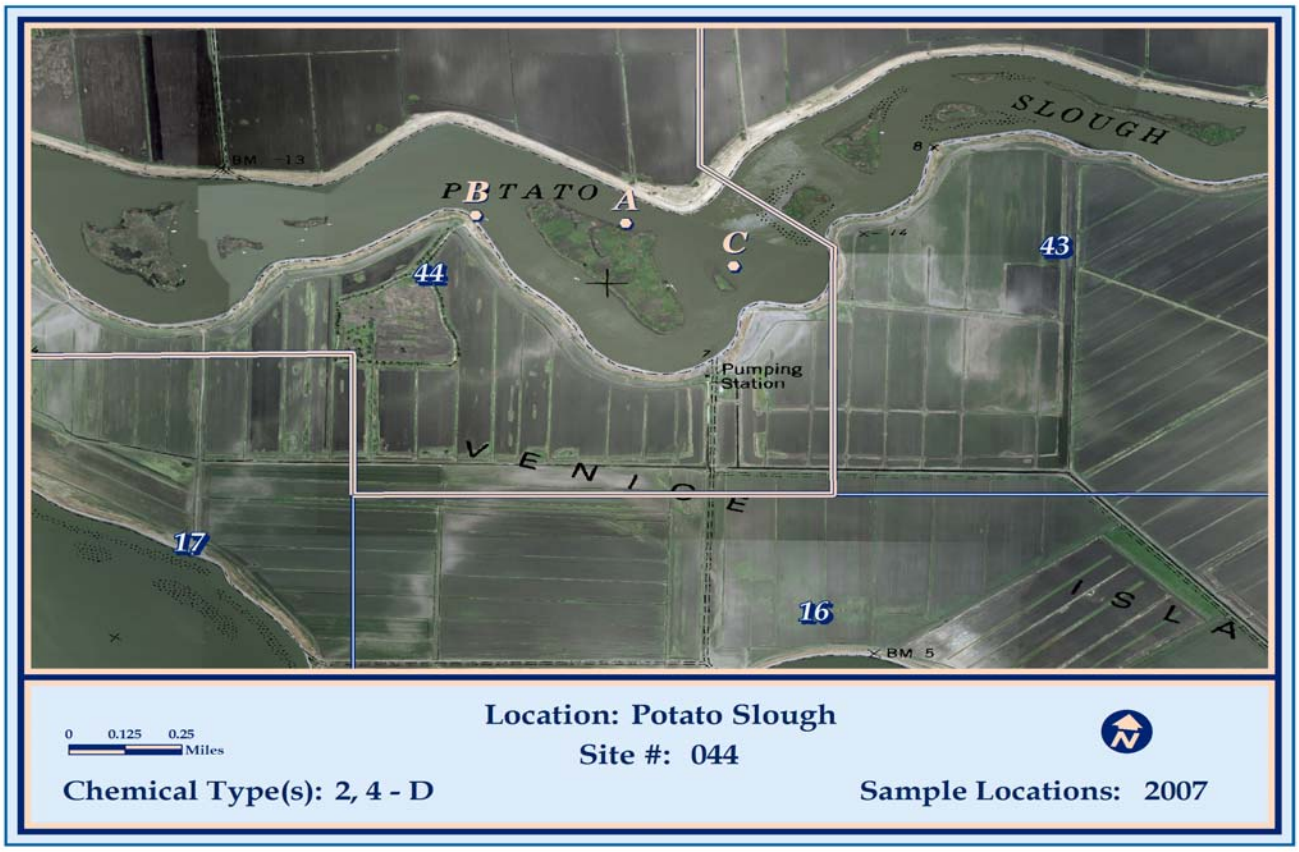
Sample Location	Lab Sample ID	DBW ID	Date Sample Taken	Date Sample Received	Date Sample Extracted	Date Sample Analyzed	2,4-D (ppb)
1A	2007-0312	H044-081407-3A	8/14/2007	8/14/2007	8/17/2007	8/23/2007	ND
1C	2007-0311	H044-081407-2A	8/14/2007	8/14/2007	8/17/2007	8/23/2007	ND
2B	2007-0314	H044-081407-5A	8/14/2007	8/14/2007	8/17/2007	8/23/2007	ND
3A	2007-0322	H044-081607-3A	8/16/2007	8/16/2007	8/20/2007	8/24/2007	0.2
3B	2007-0324	H044-081607-5A	8/16/2007	8/16/2007	8/20/2007	8/24/2007	0.1
3C	2007-0321	H044-081607-2A	8/16/2007	8/16/2007	8/20/2007	8/24/2007	0.2

Agridex Residue

Sample Location	Lab Sample ID	DBW ID	Date Sample Taken	Date Sample Received	Date Sample Extracted	Date Sample Analyzed	Agridex (ppb)
1A	2007-0312	H044-081407-3A	8/14/2007	8/14/2007	9/21/2007	10/1/2007	ND
1C	2007-0311	H044-081407-2A	8/14/2007	8/14/2007	9/21/2007	10/1/2007	ND
2B	2007-0314	H044-081407-5A	8/14/2007	8/14/2007	9/21/2007	10/1/2007	ND
3A	2007-0322	H044-081607-3A	8/16/2007	8/16/2007	9/21/2007	10/1/2007	ND
3B	2007-0324	H044-081607-5A	8/16/2007	8/16/2007	9/21/2007	10/1/2007	ND
3C	2007-0321	H044-081607-2A	8/16/2007	8/16/2007	9/21/2007	10/1/2007	ND

WATER QUALITY DATA

Sample Location	Sample ID	Date	UTM Easting	UTM Northing	Time	Water Temp (°C)	Conduct-ivity (mS/cm)	Salinity (ppt)	DO (mg/L)	pH	Turbidity (NTU)	Tide Cycle
1A	H044-081407-3	08/14/07	627867	4216273	09:25:00	0.0	0	0	7.30	0	0	high slack
1C	H044-081407-2	08/14/07	628094	4216130	09:10:00	0.0	0	0	7.50	0	0	high slack
2B	H044-081407-5	08/14/07	627421	4216332	10:40:00	0.0	0	0	6.90	0	0	high slack
3A	H044-081607-3	08/16/07	627872	4216276	10:02:45	21.89	0.204	0.09	8.16	7.69	6.1	high slack
3B	H044-081607-5	08/16/07	627421	4216332	10:14:28	21.98	0.206	0.09	8.32	7.78	5.0	high slack
3C	H044-081607-2	08/16/07	628100	4216132	09:49:39	22.12	.1872	0.08	8.13	7.88	6.0	high slack



SITE 065
HERBICIDE RESIDUE RESULTS

2,4-D Residue

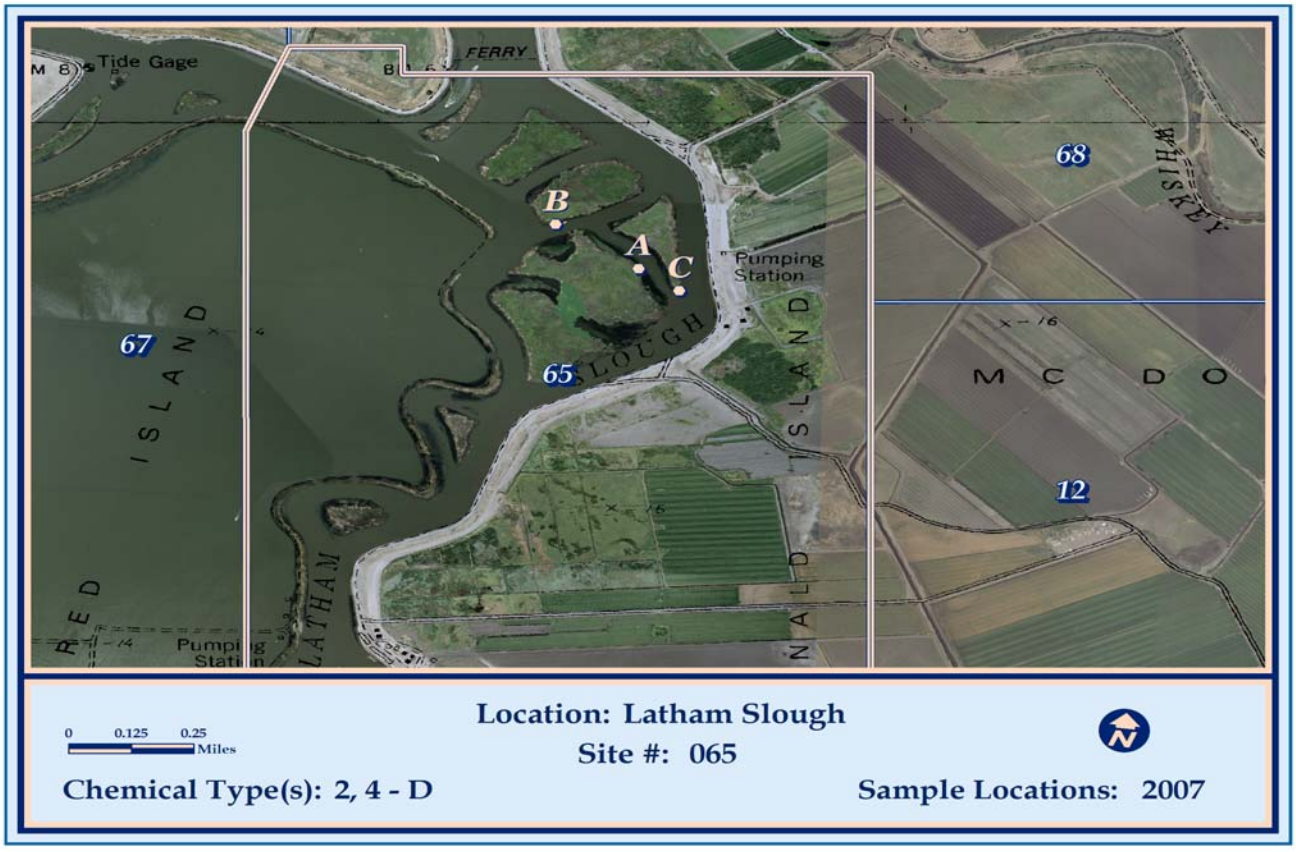
Sample Location	Lab Sample ID	DBW ID	Date Sample Taken	Date Sample Received	Date Sample Extracted	Date Sample Analyzed	2,4-D (ppb)
1A	2007-0386	H065-082107-3	8/21/2007	8/21/2007	8/23/2007	8/28/2007	ND
1C	2007-0385	H065-082107-2	8/21/2007	8/21/2007	8/23/2007	8/28/2007	ND
2B	2007-0388	H065-082107-5	8/21/2007	8/21/2007	8/23/2007	8/28/2007	ND
3A	2007-0413	H065-082407-3	8/24/2007	8/24/2007	8/27/2007	8/29/2007	0.6
3B	2007-0415	H065-082407-5	8/24/2007	8/24/2007	8/27/2007	8/29/2007	0.2
3C	2007-0412	H065-082407-2	8/24/2007	8/24/2007	8/27/2007	8/29/2007	0.3

Agridex Residue

Sample Location	Lab Sample ID	DBW ID	Date Sample Taken	Date Sample Received	Date Sample Extracted	Date Sample Analyzed	Agridex (ppb)
1A	2007-0386	H065-082107-3	8/21/2007	8/21/2007	9/25/2007	10/2/2007	ND
1C	2007-0385	H065-082107-2	8/21/2007	8/21/2007	9/25/2007	10/2/2007	ND
2B	2007-0388	H065-082107-5	8/21/2007	8/21/2007	9/25/2007	10/2/2007	ND
3A	2007-0413	H065-082407-3	8/24/2007	8/24/2007	9/25/2007	10/2/2007	ND
3B	2007-0415	H065-082407-5	8/24/2007	8/24/2007	9/25/2007	10/2/2007	ND
3C	2007-0412	H065-082407-2	8/24/2007	8/24/2007	9/25/2007	10/2/2007	ND

WATER QUALITY DATA

Sample Location	Sample ID	Date	UTM Easting	UTM Northing	Time	Water Temp (°C)	Conductivity (mS/cm)	Salinity (ppt)	DO (mg/L)	pH	Turbidity (NTU)	Tide Cycle
1A	H065-082107-3	08/21/07	631028	4206315	09:41:57	23.32	0.263	0.13	7.96	7.55	3.3	ebb
1C	H065-082107-2	08/21/07	631132	4206234	09:27:24	22.80	0.268	0.13	7.84	7.73	12.6	ebb
2B	H065-082107-5	08/21/07	630814	4206477	10:38:14	23.46	0.269	0.13	8.11	8.17	7.1	ebb
3A	H065-082407-3	08/24/07	631026	4206313	08:23:16	23.06	0.282	0.14	4.93	7.40	8.0	ebb
3B	H065-082407-5	08/24/07	630816	4206478	08:37:55	23.19	0.311	0.15	8.25	7.87	4.9	ebb
3C	H065-082407-2	08/24/07	631132	4206238	08:12:01	22.96	0.298	0.14	6.41	7.62	1.9	ebb



SITE 068
HERBICIDE RESIDUE RESULTS

2,4-D Residue

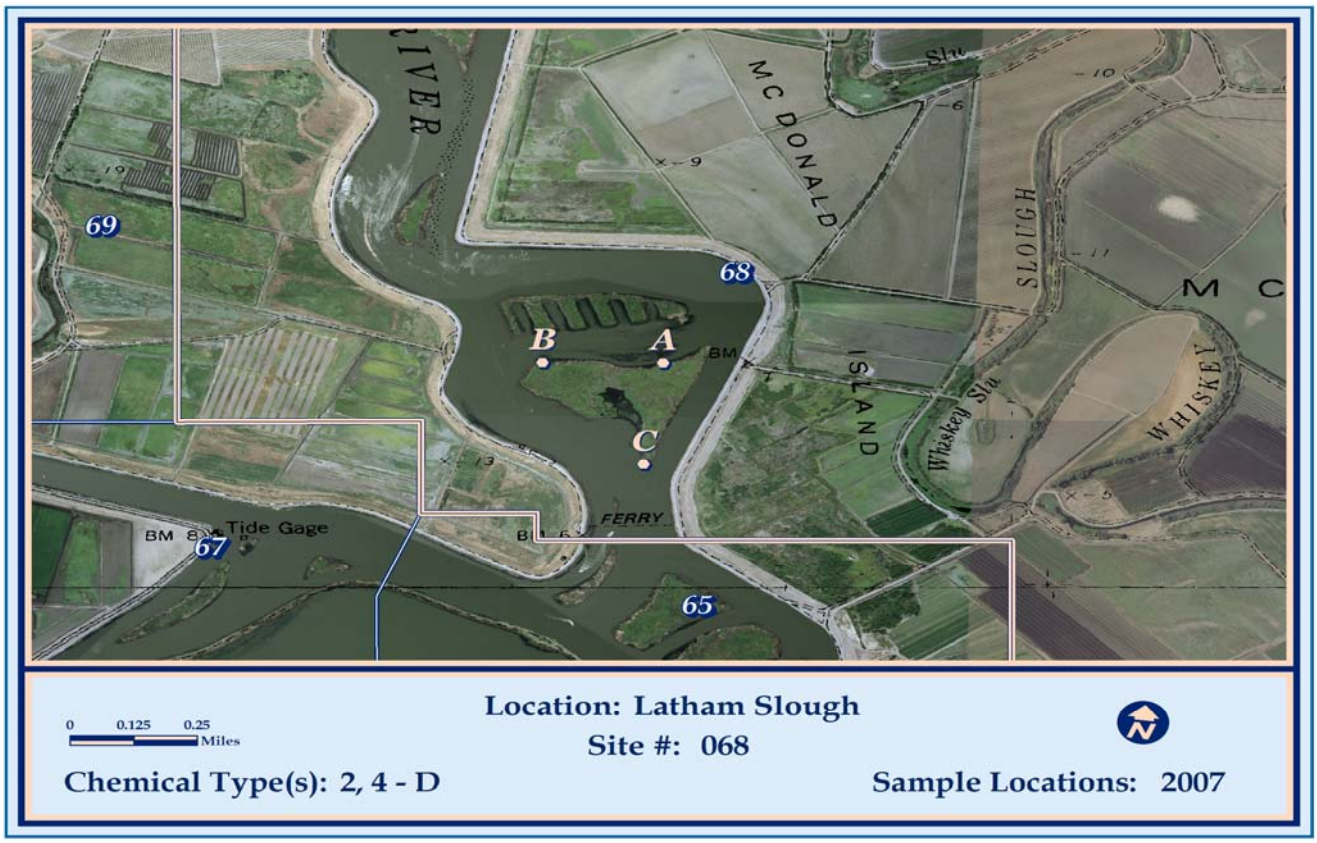
Sample Location	Lab Sample ID	DBW ID	Date Sample Taken	Date Sample Received	Date Sample Extracted	Date Sample Analyzed	2,4-D (ppb)
1A	2007-0381	H068-082107-3	8/21/2007	8/21/2007	8/23/2007	8/28/2007	ND
1C	2007-0380	H068-082107-2	8/21/2007	8/21/2007	8/23/2007	8/28/2007	ND
2B	2007-0383	H068-082107-5	8/21/2007	8/21/2007	8/23/2007	8/28/2007	ND
3A	2007-0418	H068-082407-3	8/24/2007	8/24/2007	8/27/2007	8/29/2007	0.3
3B	2007-0420	H068-082407-5	8/24/2007	8/24/2007	8/27/2007	8/29/2007	0.3
3C	2007-0417	H068-082407-2	8/24/2007	8/24/2007	8/27/2007	8/29/2007	0.2

Agridex Residue

Sample Location	Lab Sample ID	DBW ID	Date Sample Taken	Date Sample Received	Date Sample Extracted	Date Sample Analyzed	Agridex (ppb)
1A	2007-0381	H068-082107-3	8/21/2007	8/21/2007	9/25/2007	10/2/2007	ND
1C	2007-0380	H068-082107-2	8/21/2007	8/21/2007	9/25/2007	10/2/2007	ND
2B	2007-0383	H068-082107-5	8/21/2007	8/21/2007	9/25/2007	10/2/2007	ND
3A	2007-0418	H068-082407-3	8/24/2007	8/24/2007	9/26/2007	10/4/2007	ND
3B	2007-0420	H068-082407-5	8/24/2007	8/24/2007	9/26/2007	10/4/2007	ND
3C	2007-0417	H068-082407-2	8/24/2007	8/24/2007	9/26/2007	10/4/2007	ND

WATER QUALITY DATA

Sample Location	Sample ID	Date	UTM Easting	UTM Northing	Time	Water Temp (°C)	Conductivity (mS/cm)	Salinity (ppt)	DO (mg/L)	pH	Turbidity (NTU)	Tide Cycle
1A	H068-082107-3	08/21/07	630723	4207701	08:49:35	22.61	0.271	0.10	8.7	7.89	5.0	ebb
1C	H068-082107-2	08/21/07	630680	4207318	08:34:44	22.79	0.270	0.13	8.26	8.49	3.1	ebb
2B	H068-082107-5	08/21/07	630420	4207700	10:03:55	23.25	0.269	0.13	9.56	7.97	19.3	ebb
3A	H068-082407-3	08/24/07	630725	4207700	08:59:23	22.61	0.326	0.16	6.11	7.30	3.5	ebb
3B	H068-082407-5	08/24/07	630418	4207700	09:13:45	23.00	0.325	0.16	8.42	7.74	5.0	ebb
3C	H068-082407-2	08/24/07	630690	4207312	08:52:12	23.14	0.311	0.15	7.89	7.73	2.6	ebb



SITE 099
HERBICIDE RESIDUE RESULTS

2,4-D Residue

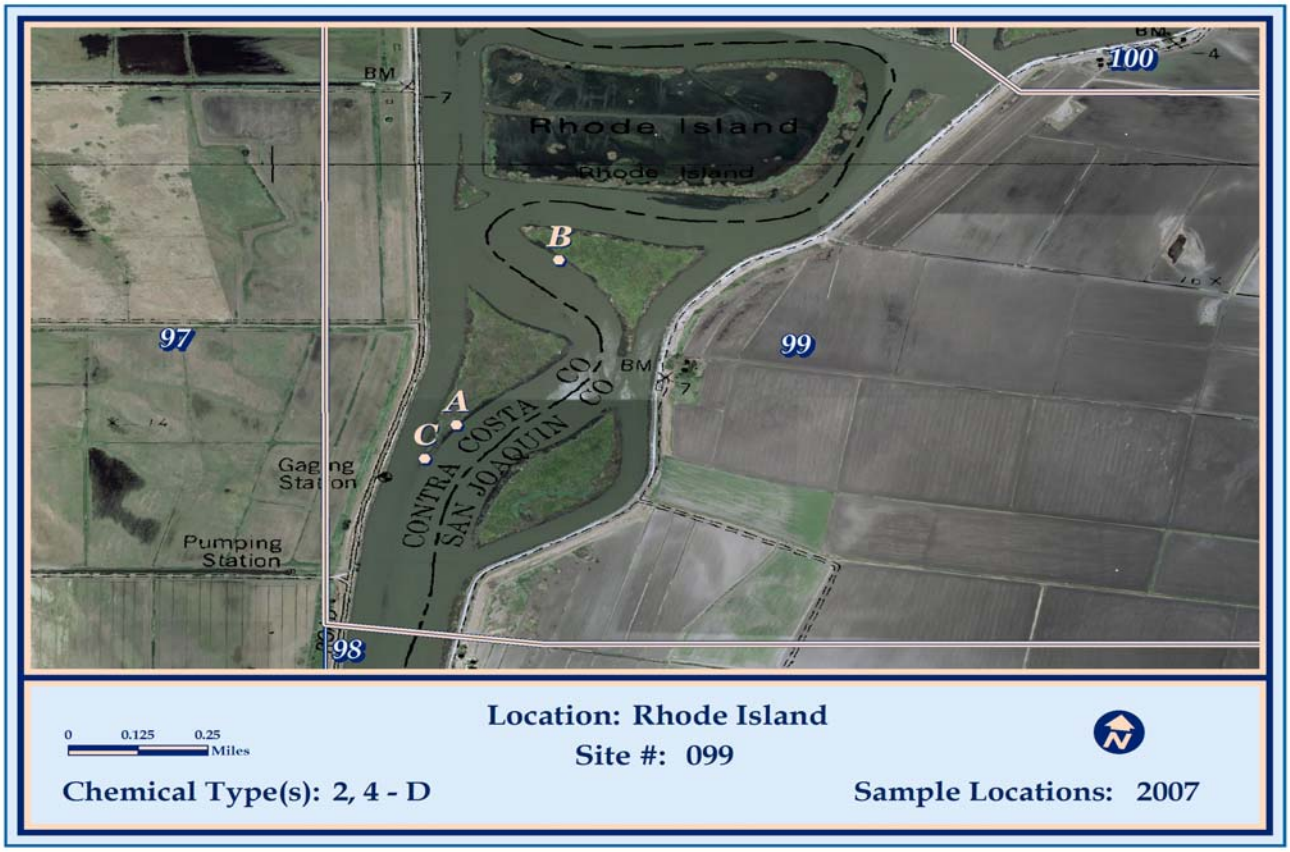
Sample Location	Lab Sample ID	DBW ID	Date Sample Taken	Date Sample Received	Date Sample Extracted	Date Sample Analyzed	2,4-D (ppb)
1A	2007-0629	H099-082707-3	8/27/2007	8/27/2007	8/29/2007	9/5/2007	ND
1C	2007-0628	H099-082707-2	8/27/2007	8/27/2007	8/29/2007	9/5/2007	ND
2B	2007-0631	H099-082707-5	8/27/2007	8/27/2007	8/29/2007	9/5/2007	0.7
3A	2007-0748	H099-082907-3	8/29/2007	8/29/2007	9/4/2007	9/11/2007	0.2
3B	2007-0750	H099-082907-5	8/29/2007	8/29/2007	9/4/2007	9/11/2007	0.1
3C	2007-0747	H099-082907-2	8/29/2007	8/29/2007	9/4/2007	9/11/2007	0.2

Agridex Residue

Sample Location	Lab Sample ID	DBW ID	Date Sample Taken	Date Sample Received	Date Sample Extracted	Date Sample Analyzed	Agridex (ppb)
1A	2007-0629	H099-082707-3	8/27/2007	8/27/2007	9/26/2007	10/4/2007	ND
1C	2007-0628	H099-082707-2	8/27/2007	8/27/2007	9/26/2007	10/4/2007	ND
2B	2007-0631	H099-082707-5	8/27/2007	8/27/2007	9/26/2007	10/4/2007	ND
3A	2007-0748	H099-082907-3	8/29/2007	8/29/2007	9/26/2007	10/4/2007	ND
3B	2007-0750	H099-082907-5	8/29/2007	8/29/2007	9/26/2007	10/4/2007	ND
3C	2007-0747	H099-082907-2	8/29/2007	8/29/2007	9/26/2007	10/4/2007	ND

WATER QUALITY DATA

Sample Location	Sample ID	Date	UTM Easting	UTM Northing	Time	Water Temp (°C)	Conductivity (mS/cm)	Salinity (ppt)	DO (mg/L)	pH	Turbidity (NTU)	Tide Cycle
1A	H099-082707-3	08/27/07	624723	4205897	09:19:53	22.49	0.885	0.46	8.65	8.29	6.1	flood
1C	H099-082707-2	08/27/07	624652	4205783	09:11:26	22.46	0.861	0.45	8.41	8.26	6.6	flood
2B	H099-082707-5	08/27/07	624947	4206448	11:21:36	22.68	0.856	0.45	8.37	8.15	4.3	ebb
3A	H099-082907-3	08/29/07	624725	4205899	08:17:49	23.23	0.872	0.46	8.79	8.44	118.1	ebb
3B	H099-082907-5	08/29/07	624946	4206453	08:38:42	23.21	0.843	0.44	8.86	8.38	6.1	ebb
3C	H099-082907-2	08/29/07	624655	4205784	08:08:49	23.29	0.879	0.46	9.25	8.50	15.4	ebb



SITE 102
HERBICIDE RESIDUE RESULTS

2,4-D Residue

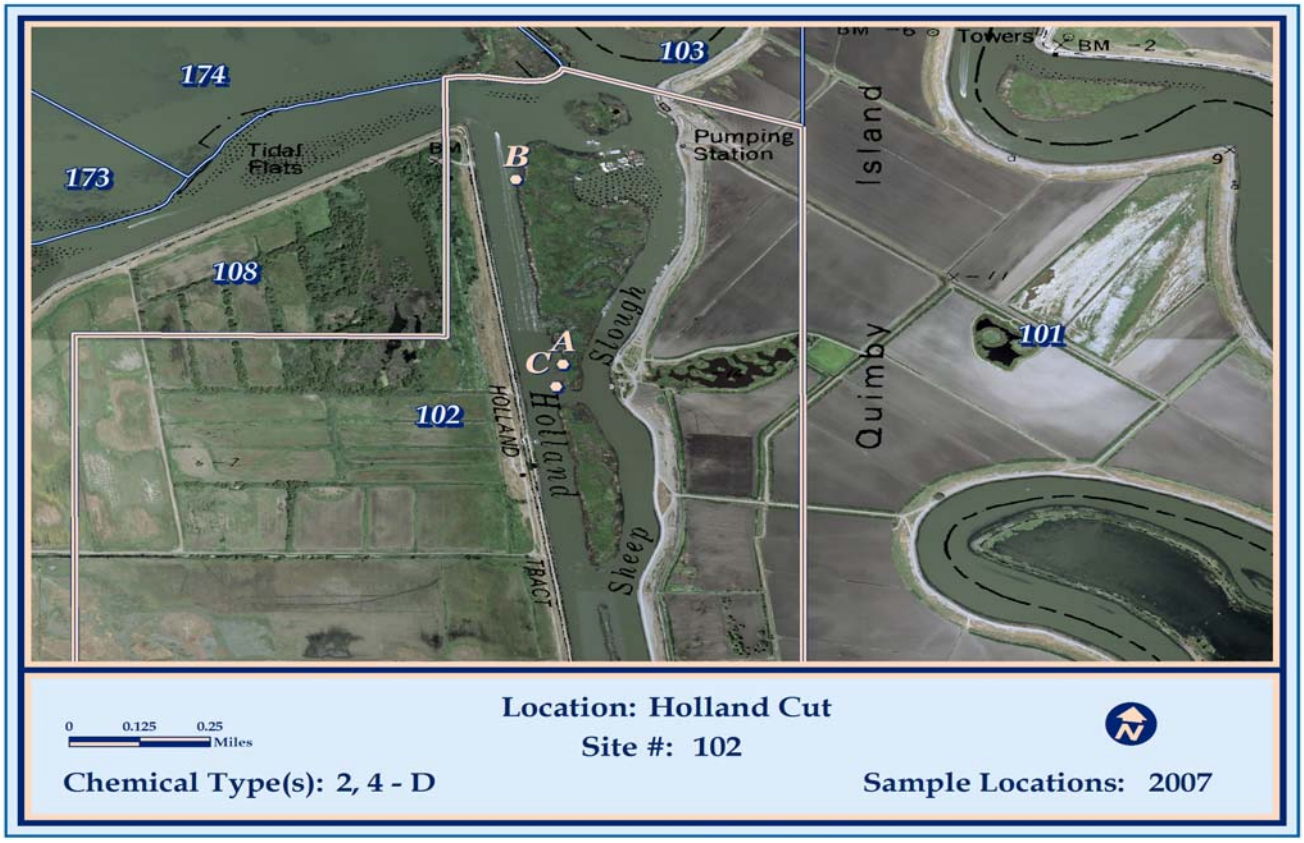
Sample Location	Lab Sample ID	DBW ID	Date Sample Taken	Date Sample Received	Date Sample Extracted	Date Sample Analyzed	2,4-D (ppb)
1A	2007-0634	H102-082707-3	8/27/2007	8/27/2007	8/29/2007	9/5/2007	0.1
1C	2007-0633	H102-082707-2	8/27/2007	8/27/2007	9/11/2007	9/19/2007	0.1
2B	2007-0636	H102-082707-5	8/27/2007	8/27/2007	8/29/2007	9/5/2007	1.2
3A	2007-0753	H102-082907-3	8/29/2007	8/29/2007	9/4/2007	9/11/2007	0.6
3B	2007-0755	H102-082907-5	8/29/2007	8/29/2007	9/4/2007	9/11/2007	0.1
3C	2007-0752	H102-082907-2	8/29/2007	8/29/2007	9/4/2007	9/11/2007	0.1

Agridex Residue

Sample Location	Lab Sample ID	DBW ID	Date Sample Taken	Date Sample Received	Date Sample Extracted	Date Sample Analyzed	Agridex (ppb)
3A	2007-0753	H102-082907-3	8/7/2007	8/7/2007	9/13/2007	9/27/2007	ND
3B	2007-0755	H102-082907-5	8/7/2007	8/7/2007	9/13/2007	9/27/2007	ND
3C	2007-0752	H102-082907-2	8/7/2007	8/7/2007	9/13/2007	9/27/2007	ND
1A	2007-0634	H102-082707-3	8/27/2007	8/27/2007	9/26/2007	10/4/2007	ND
1C	2007-0633	H102-082707-2	8/27/2007	8/27/2007	9/26/2007	10/4/2007	ND
2B	2007-0636	H102-082707-5	8/27/2007	8/27/2007	9/26/2007	10/4/2007	ND

WATER QUALITY DATA

Sample Location	Sample ID	Date	UTM Easting	UTM Northing	Time	Water Temp (°C)	Conductivity (mS/cm)	Salinity (ppt)	DO (mg/L)	pH	Turbidity (NTU)	Tide Cycle
1A	H102-082707-3	08/27/07	624447	4209282	08:39:29	21.93	0.824	0.43	7.65	7.99	6.5	flood
1C	H102-082707-2	08/27/07	624431	4209207	08:31:15	22.04	0.861	0.45	8.40	8.40	7.3	flood
2B	H102-082707-5	08/27/07	624330	4209901	10:18:20	22.19	0.891	0.47	8.10	8.03	7.0	flood
3A	H102-082907-3	08/29/07	624444	4209279	09:03:37	22.83	0.849	0.44	7.73	8.03	6.9	ebb
3B	H102-082907-5	08/29/07	624329	4209899	09:14:49	23.06	0.885	0.46	8.63	8.40	3.7	ebb
3C	H102-082907-2	08/29/07	624439	4209191	08:53:18	22.99	0.762	0.39	8.39	8.16	5.9	ebb



SITE 058
HERBICIDE RESIDUE RESULTS

2,4-D Residue

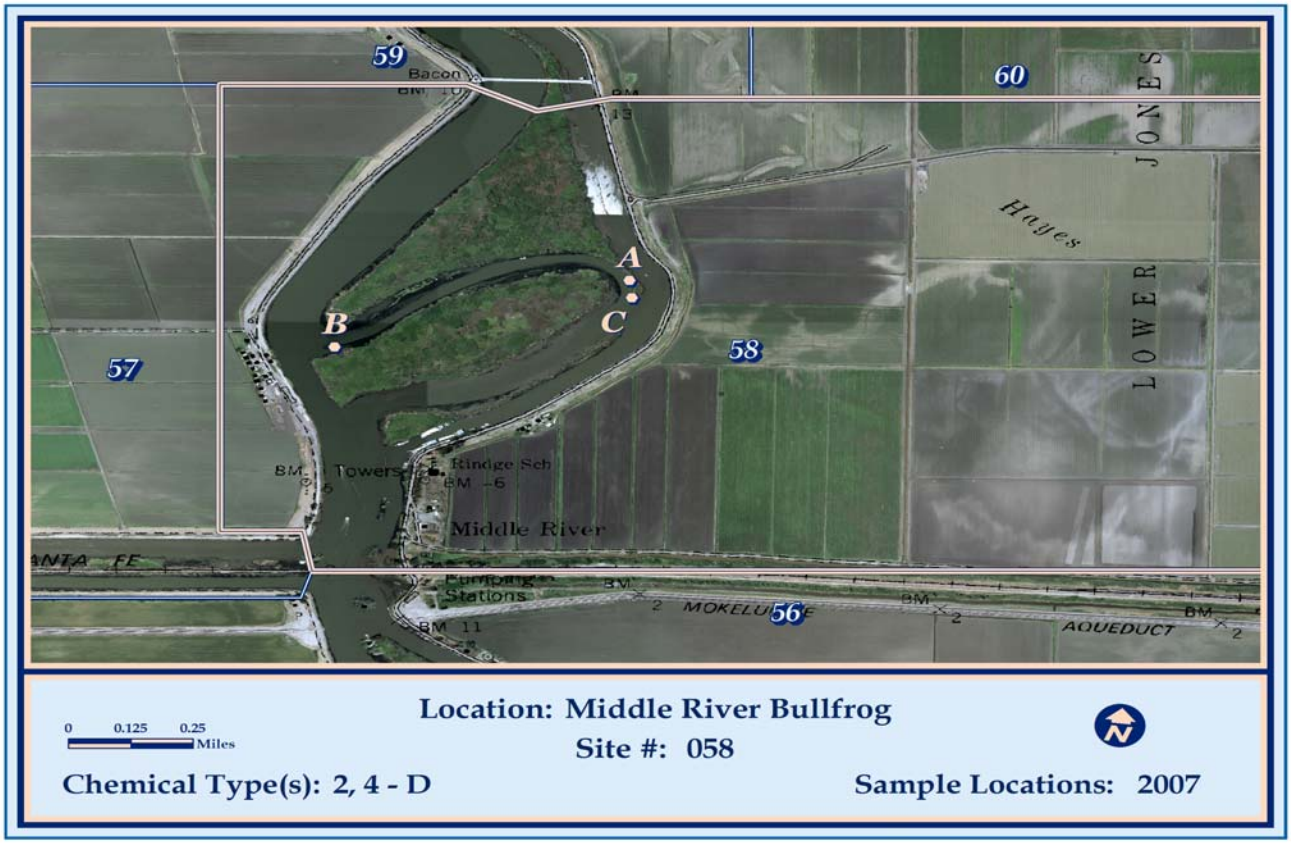
Sample Location	Lab Sample ID	DBW ID	Date Sample Taken	Date Sample Received	Date Sample Extracted	Date Sample Analyzed	2,4-D (ppb)
1A	2007-0778	H058-090607-3	9/6/2007	9/6/2007	9/7/2007	9/12/2007	0.2
1C	2007-0777	H058-090607-2	9/6/2007	9/6/2007	9/7/2007	9/12/2007	0.2
2B	2007-0780	H058-090607-5	9/6/2007	9/6/2007	9/7/2007	9/12/2007	0.2
3A	2007-0799	H058-091007-3	9/10/2007	9/10/2007	9/11/2007	9/19/2007	0.2
3B	2007-0801	H058-091007-5	9/10/2007	9/10/2007	9/11/2007	9/19/2007	0.2
3C	2007-0798	H058-091007-2	9/10/2007	9/10/2007	9/11/2007	9/19/2007	0.2

Agridex Residue

Sample Location	Lab Sample ID	DBW ID	Date Sample Taken	Date Sample Received	Date Sample Extracted	Date Sample Analyzed	Agridex (ppb)
1A	2007-0778	H058-090607-3	9/6/2007	9/6/2007	9/27/2007	10/5/2007	ND
1C	2007-0777	H058-090607-2	9/6/2007	9/6/2007	9/27/2007	10/5/2007	ND
2B	2007-0780	H058-090607-5	9/6/2007	9/6/2007	9/27/2007	10/5/2007	ND
3A	2007-0799	H058-091007-3	9/10/2007	9/10/2007	9/27/2007	10/5/2007	ND
3B	2007-0801	H058-091007-5	9/10/2007	9/10/2007	9/27/2007	10/5/2007	ND
3C	2007-0798	H058-091007-2	9/10/2007	9/10/2007	9/27/2007	10/5/2007	ND

WATER QUALITY DATA

Sample Location	Sample ID	Date	UTM Easting	UTM Northing	Time	Water Temp (°C)	Conductivity (mS/cm)	Salinity (ppt)	DO (mg/L)	pH	Turbidity (NTU)	Tide Cycle
1A	H058-090607-3	09/06/07	629594	4201253	08:51:25	23.96	0.347	0.17	6.70	7.49	3.9	ebb
1C	H058-090607-2	09/06/07	629599	4201188	08:36:03	24.13	0.342	0.17	7.60	7.62	3.5	ebb
2B	H058-090607-5	09/06/07	628846	4200992	10:27:06	23.91	0.358	0.10	7.35	7.60	11.0	ebb
3A	H058-091007-3	09/10/07	629596	4201249	08:12:18	22.66	0.370	0.18	7.16	7.65	16.0	ebb
3B	H058-091007-5	09/10/07	628859	4200999	08:29:22	22.55	0.380	0.19	7.45	7.69	5.6	ebb
3C	H058-091007-2	09/10/07	629598	4201198	08:02:04	22.88	0.335	0.16	7.39	8.08	4.2	ebb



SITE 059
HERBICIDE RESIDUE RESULTS

2,4-D Residue

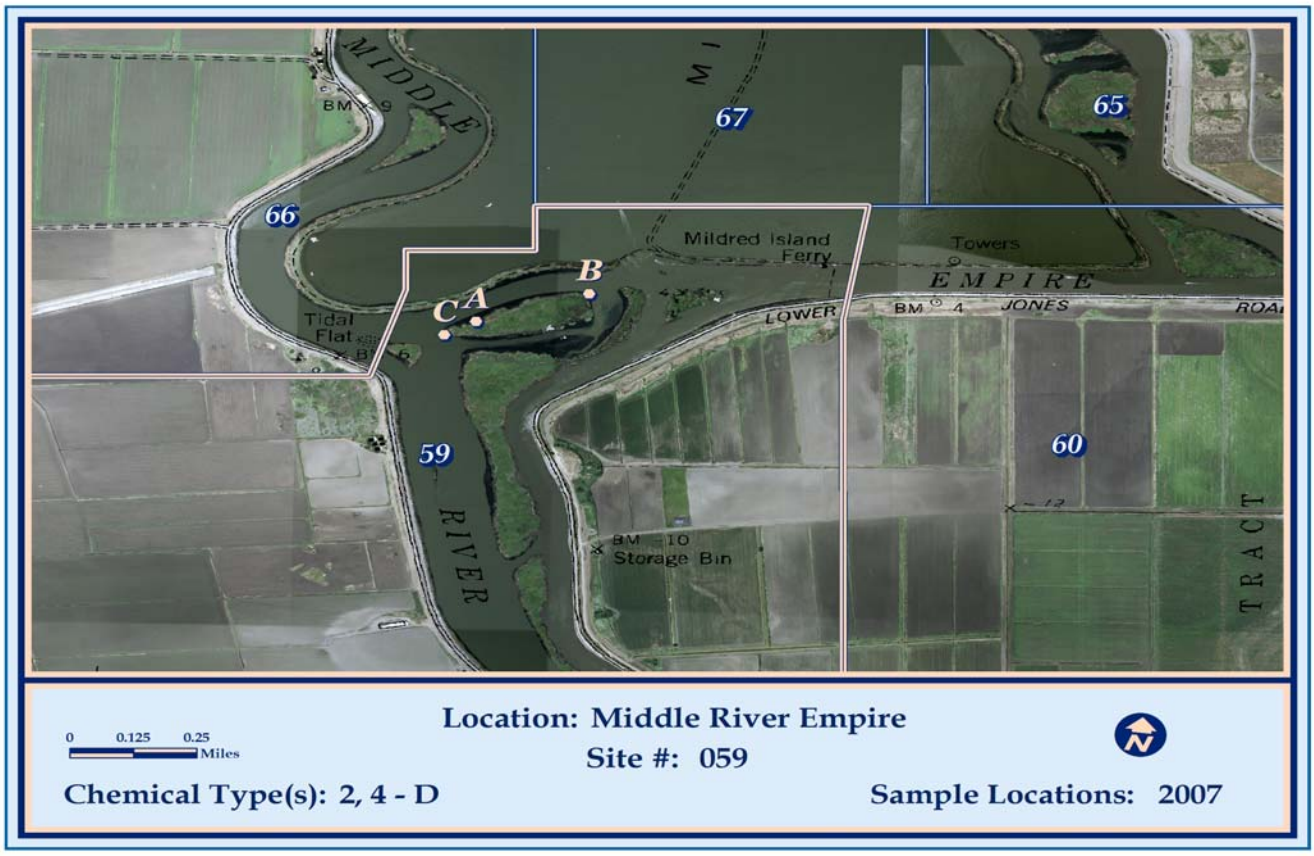
Sample Location	Lab Sample ID	DBW ID	Date Sample Taken	Date Sample Received	Date Sample Extracted	Date Sample Analyzed	2,4-D (ppb)
1A	2007-0783	H059-090607-3	9/6/2007	9/6/2007	9/7/2007	9/12/2007	0.2
1C	2007-0782	H059-090607-2	9/6/2007	9/6/2007	9/7/2007	9/12/2007	0.3
2B	2007-0785	H059-090607-5	9/6/2007	9/6/2007	9/7/2007	9/12/2007	0.2
3A	2007-0804	H059-091007-3	9/10/2007	9/10/2007	9/11/2007	9/19/2007	0.1
3B	2007-0806	H059-091007-5	9/10/2007	9/10/2007	9/11/2007	9/19/2007	0.2
3C	2007-0803	H059-091007-2	9/10/2007	9/10/2007	9/11/2007	9/19/2007	0.3

Agridex Residue

Sample Location	Lab Sample ID	DBW ID	Date Sample Taken	Date Sample Received	Date Sample Extracted	Date Sample Analyzed	Agridex (ppb)
1A	2007-0783	H059-090607-3	9/6/2007	9/6/2007	9/27/2007	10/5/2007	ND
1C	2007-0782	H059-090607-2	9/6/2007	9/6/2007	9/27/2007	10/5/2007	ND
2B	2007-0785	H059-090607-5	9/6/2007	9/6/2007	9/27/2007	10/5/2007	ND
3A	2007-0804	H059-091007-3	9/10/2007	9/10/2007	9/27/2007	10/5/2007	ND
3B	2007-0806	H059-091007-5	9/10/2007	9/10/2007	9/27/2007	10/5/2007	ND
3C	2007-0803	H059-091007-2	9/10/2007	9/10/2007	9/27/2007	10/5/2007	ND

WATER QUALITY DATA

Sample Location	Sample ID	Date	UTM Easting	UTM Northing	Time	Water Temp (ºC)	Conductivity (mS/cm)	Salinity (ppt)	DO (mg/L)	pH	Turbidity (NTU)	Tide Cycle
1A	H059-090607-3	09/06/07	628948	4203532	08:13:38	22.49	0.339	0.17	5.20	7.14	5.4	ebb
1C	H059-090607-2	09/06/07	628867	4203491	08:04:42	23.05	0.363	0.18	7.49	7.68	22.3	ebb
2B	H059-090607-5	09/06/07	629230	4203639	09:23:38	24.21	0.331	0.16	7.28	7.63	8.6	ebb
3A	H059-091007-3	09/10/07	628949	4203532	09:02:11	22.98	0.336	0.16	6.39	7.52	23.2	ebb
3B	H059-091007-5	09/10/07	629224	4203638	10:00:58	22.18	0.338	0.17	7.52	7.97	4.2	ebb
3C	H059-091007-2	09/10/07	628869	4203491	08:49:04	22.58	0.385	0.19	7.69	7.88	3.9	ebb



SITE 320 (September)
HERBICIDE RESIDUE RESULTS

2,4-D Residue

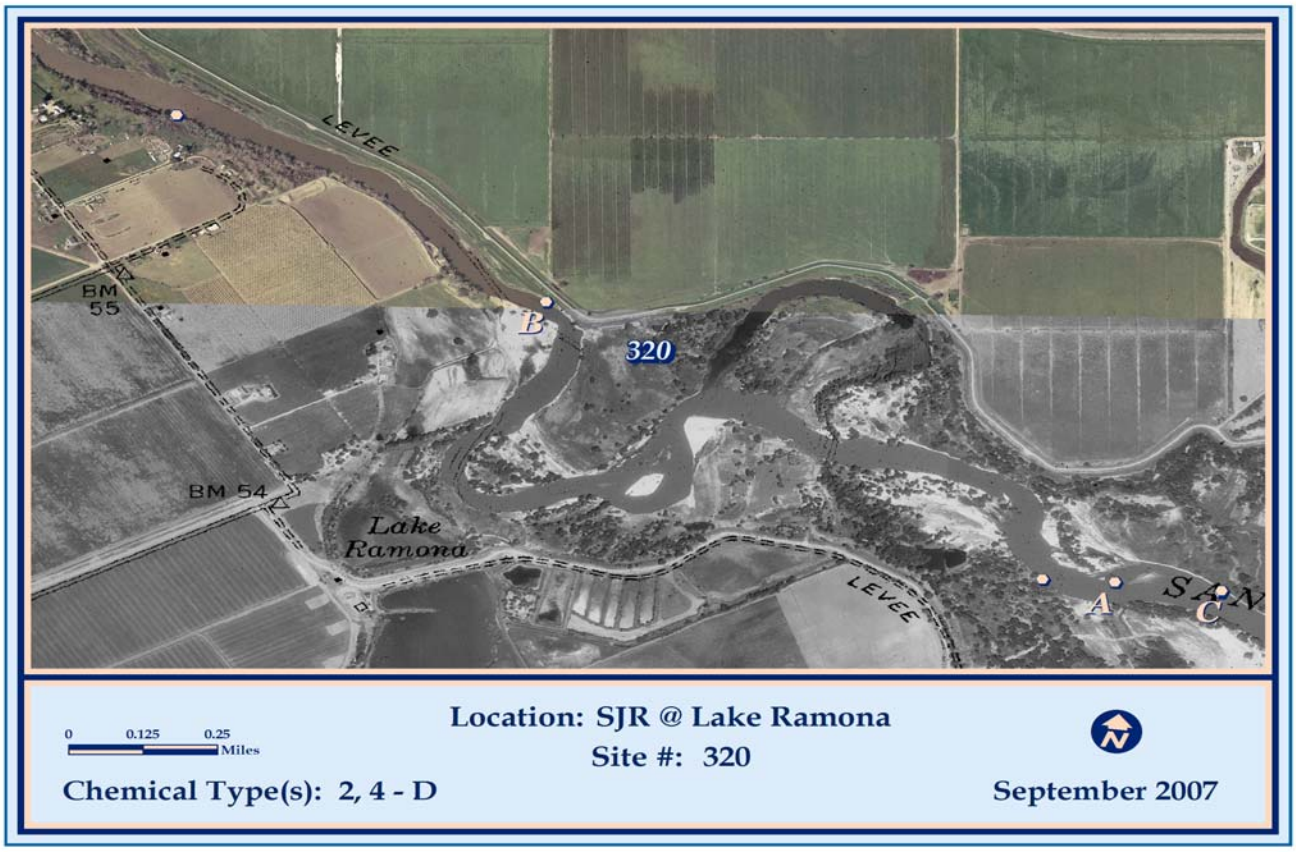
Sample Location	Lab Sample ID	DBW ID	Date Sample Taken	Date Sample Received	Date Sample Extracted	Date Sample Analyzed	2,4-D (ppb)
1A	2007-1006	H320-092407-3	9/24/2007	9/25/2007	10/2/2007	10/11/2007	ND
1C	2007-1005	H320-092407-2	9/24/2007	9/25/2007	10/2/2007	10/11/2007	ND
2B	2007-1008	H320-092407-5	9/24/2007	9/25/2007	10/2/2007	10/15/2007	7.8
3A	2007-1043	H320-092607-3	9/26/2007	9/27/2007	10/3/2007	10/15/2007	0.2
3B	2007-1045	H320-092607-5	9/26/2007	9/27/2007	10/3/2007	10/15/2007	0.1
3C	2007-1042	H320-092607-2	9/26/2007	9/27/2007	10/3/2007	10/15/2007	ND

Agridex Residue

Sample Location	Lab Sample ID	DBW ID	Date Sample Taken	Date Sample Received	Date Sample Extracted	Date Sample Analyzed	Agridex (ppb)
1A	2007-1006	H320-092407-3	9/24/2007	9/25/2007	10/1/2007	10/15/2007	ND
1C	2007-1005	H320-092407-2	9/24/2007	9/25/2007	10/1/2007	10/15/2007	ND
2B	2007-1008	H320-092407-5	9/24/2007	9/25/2007	10/1/2007	10/15/2007	ND
3A	2007-1043	H320-092607-3	9/26/2007	9/27/2007	10/1/2007	10/15/2007	ND
3B	2007-1045	H320-092607-5	9/26/2007	9/27/2007	10/1/2007	10/15/2007	ND
3C	2007-1042	H320-092607-2	9/26/2007	9/27/2007	10/1/2007	10/15/2007	ND

WATER QUALITY DATA

Sample Location	Sample ID	Date	UTM Easting	UTM Northing	Time	Water Temp (°C)	Conductivity (mS/cm)	Salinity (ppt)	DO (mg/L)	pH	Turbidity (NTU)	Tide Cycle
1A	H320-092407-3	09/24/07	672066	4149674	09:40:00	19.9	0	0	8.85	0	0	N/A
1C	H320-092407-2	09/24/07	672309	4149651	09:30:00	19.52	.980	.51	7.96	8.12	42.2	N/A
2B	H320-092407-5	09/24/07	670834	4150525	11:15:00	20.8	0	0	8.85	0	0	N/A
3A	H320-092607-3	09/26/07	672069	4149674	10:38:57	20.47	1.027	0.54	8.38	7.87	28.7	N/A
3B	H320-092607-5	09/26/07	670832	4150521	11:00:50	20.39	1.084	0.57	8.68	7.88	43.0	N/A
3C	H320-092607-2	09/26/07	672304	4149649	10:27:37	20.38	1.030	0.54	8.41	7.94	59.3	N/A



SITE 321 (September)
HERBICIDE RESIDUE RESULTS

2,4-D Residue

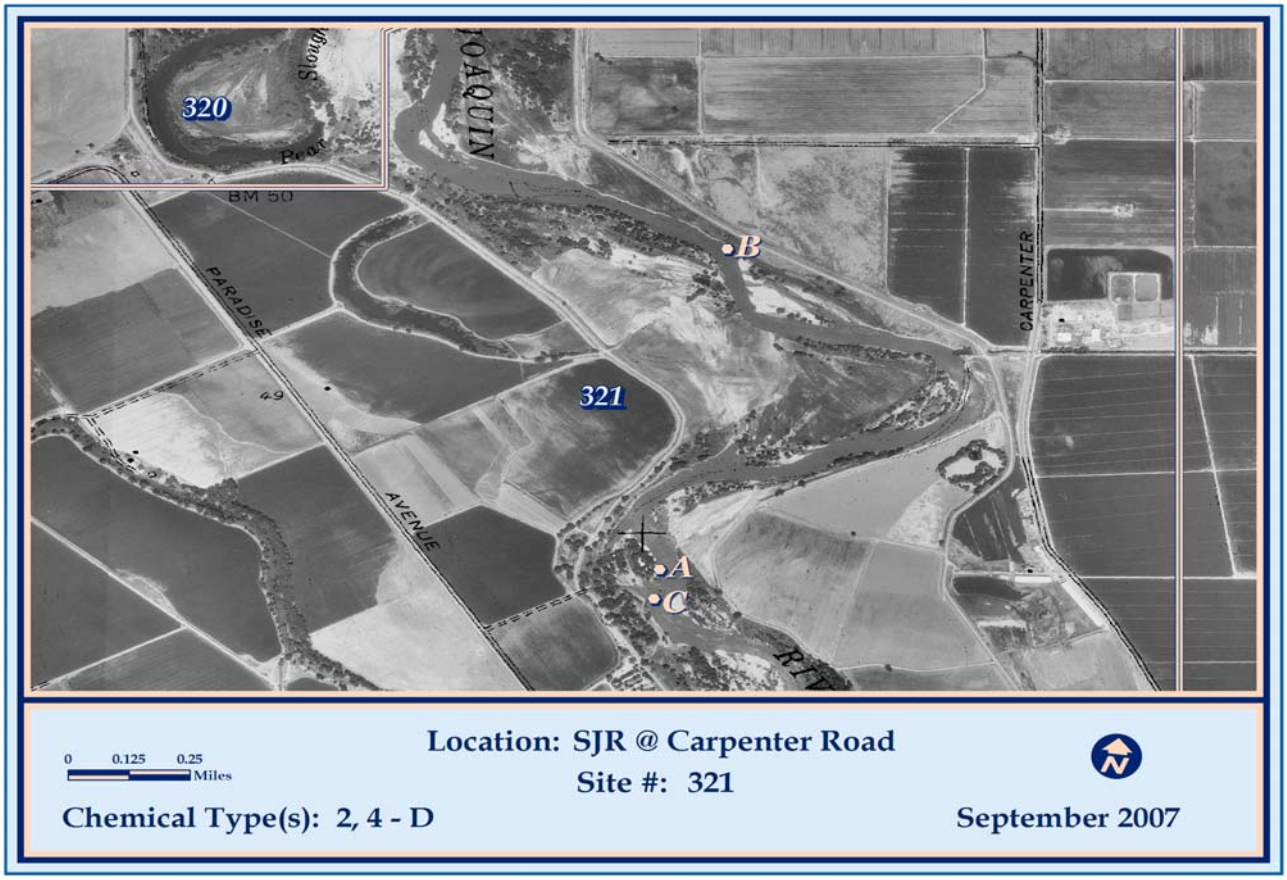
Sample Location	Lab Sample ID	DBW ID	Date Sample Taken	Date Sample Received	Date Sample Extracted	Date Sample Analyzed	2,4-D (ppb)
1A	2007-1012	H321-092407-3	9/24/2007	9/25/2007	10/2/2007	10/11/2007	ND
1C	2007-1011	H321-092407-2	9/24/2007	9/25/2007	10/2/2007	10/11/2007	ND
2B	2007-1014	H321-092407-5	9/24/2007	9/25/2007	10/2/2007	10/11/2007	0.2
3A	2007-1049	H321-092607-3	9/26/2007	9/27/2007	10/3/2007	10/15/2007	ND
3B	2007-1051	H321-092607-5	9/26/2007	9/27/2007	10/3/2007	10/15/2007	1.8
3C	2007-1048	H321-092607-2	9/26/2007	9/27/2007	10/3/2007	10/15/2007	ND

Agridex Residue

Sample Location	Lab Sample ID	DBW ID	Date Sample Taken	Date Sample Received	Date Sample Extracted	Date Sample Analyzed	Agridex (ppb)
1A	2007-1012	H321-092407-3	9/24/2007	9/25/2007	10/1/2007	10/15/2007	ND
1C	2007-1011	H321-092407-2	9/24/2007	9/25/2007	10/1/2007	10/15/2007	ND
2B	2007-1014	H321-092407-5	9/24/2007	9/25/2007	10/1/2007	10/15/2007	ND
3A	2007-1049	H321-092607-3	9/26/2007	9/27/2007	10/1/2007	10/15/2007	ND
3B	2007-1051	H321-092607-5	9/26/2007	9/27/2007	10/1/2007	10/15/2007	ND
3C	2007-1048	H321-092607-2	9/26/2007	9/27/2007	10/1/2007	10/15/2007	ND

WATER QUALITY DATA

Sample Location	Sample ID	Date	UTM Easting	UTM Northing	Time	Water Temp (ºC)	Conductivity (mS/cm)	Salinity (ppt)	DO (mg/L)	pH	Turbidity (NTU)	Tide Cycle
1A	H321-092407-3	09/24/07	673160	4147377	10:40:00	19.7	0	0	9.04	0	0	N/A
1C	H321-092407-2	09/24/07	673141	4147281	10:30:00	19.6	0	0	9.20	0	0	N/A
2B	H321-092407-5	09/24/07	673316	4148561	12:25:00	21.0	0	0	9.14	0	0	N/A
3A	H321-092607-3	09/26/07	673158	4147383	09:51:04	20.05	1.041	0.55	8.07	7.80	30.4	N/A
3B	H321-092607-5	09/26/07	673313	4148561	10:07:11	20.37	0.977	0.51	8.24	7.82	68.2	N/A
3C	H321-092607-2	09/26/07	673144	4147277	09:39:49	19.52	.0000	.001	8.10	7.78	83.3	N/A



SITE 320 (October)
HERBICIDE RESIDUE RESULTS

2,4-D Residue

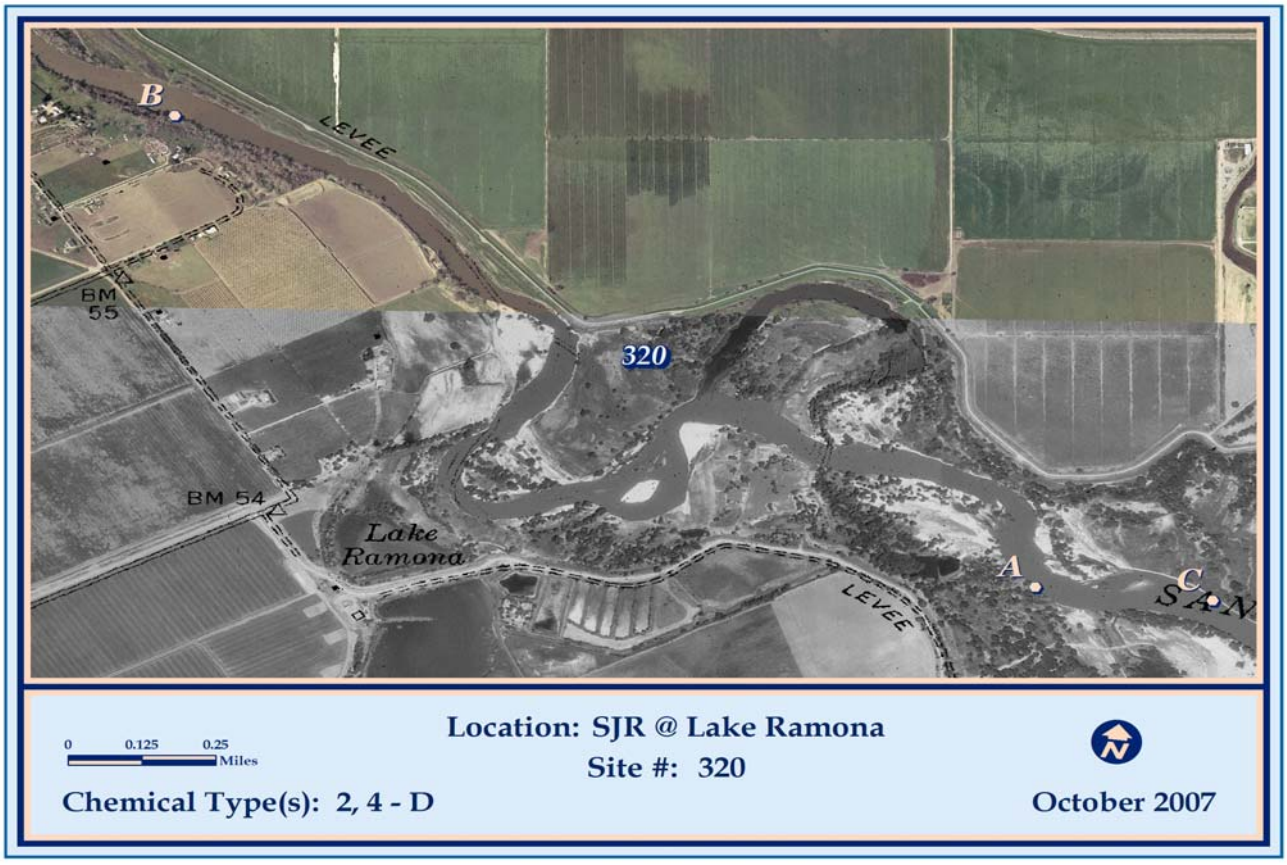
Sample Location	Lab Sample ID	DBW ID	Date Sample Taken	Date Sample Received	Date Sample Extracted	Date Sample Analyzed	2,4-D (ppb)
1A	2007-1113	H320-100107-3	10/1/2007	10/2/2007	10/9/2007	10/17/2007	ND
1C	2007-1112	H320-100107-2	10/1/2007	10/2/2007	10/9/2007	10/17/2007	ND
2B	2007-1115	H320-100107-5	10/1/2007	10/2/2007	10/9/2007	10/17/2007	1.3
3A	2007-1152	H320-100307-3	10/3/2007	10/4/2007	10/10/2007	10/17/2007	0.2
3B	2007-1154	H320-100307-5	10/3/2007	10/4/2007	10/10/2007	10/17/2007	0.1
3C	2007-1151	H320-100307-2	10/3/2007	10/4/2007	10/10/2007	10/17/2007	0.1

Agridex Residue

Sample Location	Lab Sample ID	DBW ID	Date Sample Taken	Date Sample Received	Date Sample Extracted	Date Sample Analyzed	Agridex (ppb)
1A	2007-1113	H320-100107-3	10/1/2007	10/2/2007	10/3/2007	10/11/2007	ND
1C	2007-1112	H320-100107-2	10/1/2007	10/2/2007	10/3/2007	10/11/2007	ND
2B	2007-1115	H320-100107-5	10/1/2007	10/2/2007	10/3/2007	10/11/2007	ND
3A	2007-1152	H320-100307-3	10/3/2007	10/4/2007	10/4/2007	10/17/2007	ND
3B	2007-1154	H320-100307-5	10/3/2007	10/4/2007	10/4/2007	10/17/2007	ND
3C	2007-1151	H320-100307-2	10/3/2007	10/4/2007	10/4/2007	10/17/2007	ND

WATER QUALITY DATA

Sample Location	Sample ID	Date	UTM Easting	UTM Northing	Time	Water Temp (°C)	Conductivity (mS/cm)	Salinity (ppt)	DO (mg/L)	pH	Turbidity (NTU)	Tide Cycle
1A	H320-100107-3	10/01/07	671921	4149673	09:46:00	18.78	0.957	0.50	8.43	7.92	38.9	N/A
1C	H320-100107-2	10/01/07	672141	4149273	09:37:43	18.69	0.957	0.50	8.78	8.01	35.8	N/A
2B	H320-100107-5	10/01/07	670026	4151085	11:21:59	18.84	0.997	0.52	8.79	7.89	40.9	N/A
3A	H320-100307-3	10/03/07	671922	4149673	10:23:51	19.55	1.028	0.54	8.72	7.92	35.5	N/A
3B	H320-100307-5	10/03/07	670028	4151087	10:44:23	18.98	1.055	0.55	8.11	7.87	48.0	N/A
3C	H320-100307-2	10/03/07	672305	4149648	10:13:26	19.31	1.031	0.54	8.65	8.21	58.2	N/A



SITE 321 (October)
HERBICIDE RESIDUE RESULTS

2,4-D Residue

Sample Location	Lab Sample ID	DBW ID	Date Sample Taken	Date Sample Received	Date Sample Extracted	Date Sample Analyzed	2,4-D (ppb)
1A	2007-1118	H321-100107-3	10/1/2007	10/2/2007	10/9/2007	10/17/2007	0.1
1C	2007-1117	H321-100107-2	10/1/2007	10/2/2007	10/9/2007	10/17/2007	0.2
2B	2007-1120	H321-100107-5	10/1/2007	10/2/2007	10/9/2007	10/17/2007	6.5
3A	2007-1157	H321-100307-3	10/3/2007	10/4/2007	10/10/2007	10/17/2007	ND
3B	2007-1159	H321-100307-5	10/3/2007	10/4/2007	10/10/2007	10/17/2007	0.2
3C	2007-1156	H321-100307-2	10/3/2007	10/4/2007	10/10/2007	10/17/2007	ND

Agridex Residue

Sample Location	Lab Sample ID	DBW ID	Date Sample Taken	Date Sample Received	Date Sample Extracted	Date Sample Analyzed	Agridex (ppb)
1A	2007-1118	H321-100107-3	10/1/2007	10/2/2007	10/3/2007	10/11/2007	ND
1C	2007-1117	H321-100107-2	10/1/2007	10/2/2007	10/3/2007	10/11/2007	ND
2B	2007-1120	H321-100107-5	10/1/2007	10/2/2007	10/3/2007	10/11/2007	ND
3A	2007-1157	H321-100307-3	10/3/2007	10/4/2007	10/4/2007	10/17/2007	ND
3B	2007-1159	H321-100307-5	10/3/2007	10/4/2007	10/4/2007	10/17/2007	ND
3C	2007-1156	H321-100307-2	10/3/2007	10/4/2007	10/4/2007	10/17/2007	ND

WATER QUALITY DATA

Sample Location	Sample ID	Date	UTM Easting	UTM Northing	Time	Water Temp (°C)	Conductivity (mS/cm)	Salinity (ppt)	DO (mg/L)	pH	Turbidity (NTU)	Tide Cycle
1A	H321-100107-3	10/01/07	673168	4147512	10:26:09	18.55	0.965	0.50	8.28	7.91	31.4	N/A
1C	H321-100107-2	10/01/07	673098	4147313	10:18:02	18.59	0.967	0.51	8.30	7.90	27.2	N/A
2B	H321-100107-5	10/01/07	672406	4148974	12:12:20	19.39	0.964	0.50	9.11	8.00	26.1	N/A
3A	H321-100307-3	10/03/07	673172	4147516	09:27:24	18.94	1.037	0.54	8.24	7.90	28.6	N/A
3B	H321-100307-5	10/03/07	672404	4148990	09:53:09	19.16	1.026	0.54	8.07	8.12	20.5	N/A
3C	H321-100307-2	10/03/07	673100	4147319	09:11:18	18.95	1.038	0.54	7.71	8.17	25.1	N/A